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FAST TRACKED

How Disney's Black Rock Studio plans to pull ahead of the pack

EXCLUSIVE GOVERNMENT REPORT
Will UK studios run out of IP fuel in 2010?

ACTIVISION'S BIZARRE DEAL
Buyout sparks development race

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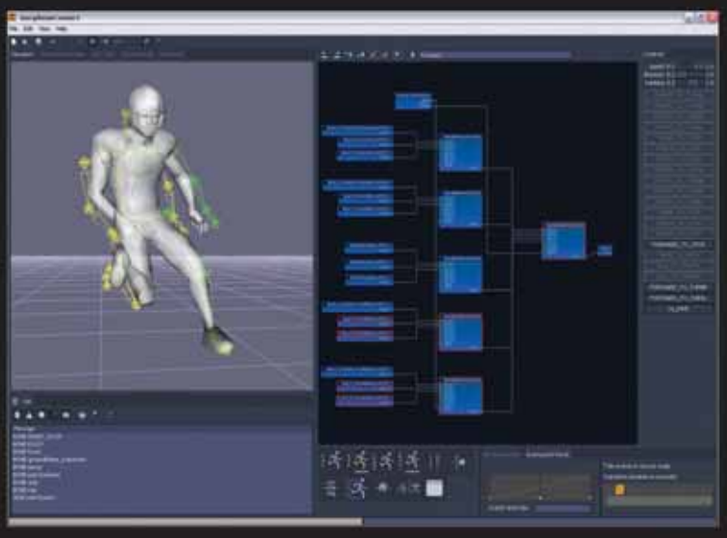


morpheme is the industry's first graphically authorable animation engine. morpheme consists of morpheme:runtime: an advanced runtime animation engine for PLAYSTATION®3, Xbox 360™ and PC, and morpheme:connect: a highly-customizable 3D authoring application.

morpheme gives animators and developers unprecedented control over the look and feel of their animations in-game: blends, transitions, compression, etc. can all be previewed and modified graphically in morpheme:connect and live on the target platform.

morpheme:runtime ships with full source code and integrates seamlessly with euphoria, NaturalMotion's Dynamic Motion Synthesis technology.

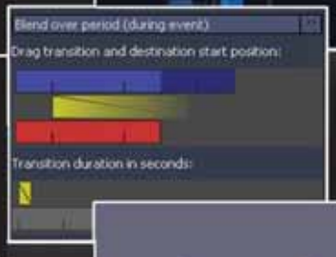
For more information, visit www.naturalmotion.com

blend tree

Advanced graphical tools for building complex blend trees. Real-time visualization of animation source contribution through node highlighting

blending

Graphical control of transition blending between states in the transition graph



multiple characters

Visualization of multiple runtime characters in morpheme:connect for easy authoring and analysis of character interaction

network

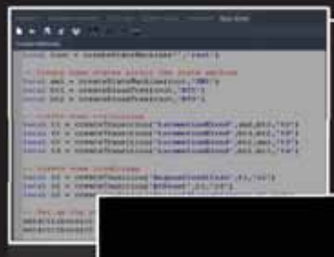
Advanced graphical tools for creating and visualizing transition networks through drag-and-drop

control parameters

Exposure of custom high-level controls for entire animation system. Real-time manipulation through sliders or game pad controller

scripting

Full Lua scripting for automating tasks, adding AI logic or polling game pads for real-time input



timeline

Graphical mark up of animation data to add one-shot and duration events, for highlighting footfalls, sound effects, etc.

node palette

Advanced blend notes for dragging and dropping into transition network. Fully customizable node types through C++ and scripting

animation browser

Easy browsing and selection (drag & drop) of source animation. Animation list is automatically updated to reflect changed source files

transition requests

Exposure of custom transition messages. In-tool emulation of interaction between morpheme:runtime and game AI system

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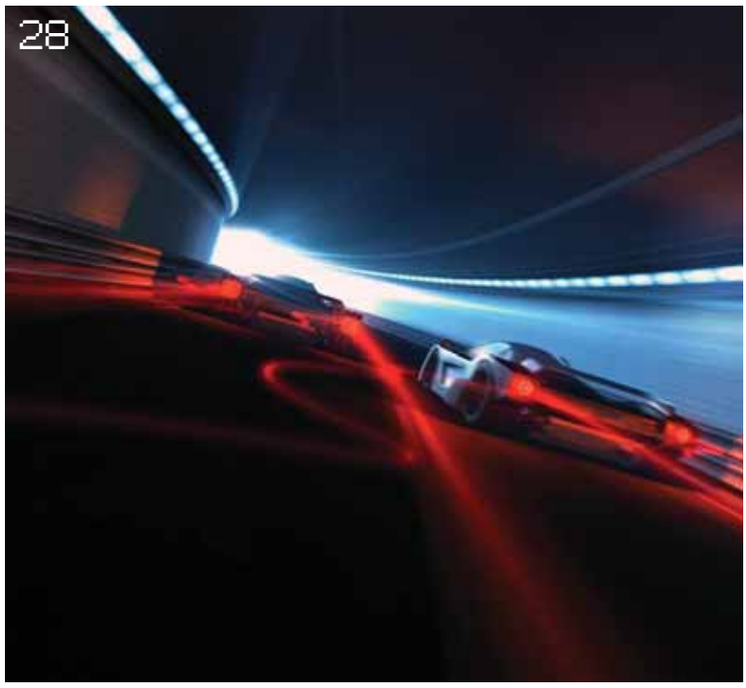

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PLUS: The months ahead in the *Develop* forward features planner

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ALPHA

ADVENTURES IN GAMES DEVELOPMENT: NEWS, VIEWS & MORE

"What's to say Havok won't be a pawn in Intel's attempts to boost utilisation of its multi-core technology?" p17

Bizarre Activated by acquisition

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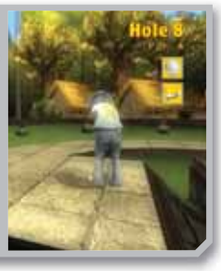
Studios across the globe scrutinised



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Power List: Exclusive studio ranking

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Will UK studios fall into the 'IP poverty trap'?

Government report explores international development sector, revealing potential long term threats to UK

The UK government's imminent 'Playing for Keeps' report has revealed the UK is in serious danger of losing its status as a prolific creator of best selling games IPs, *Develop* can reveal.

The report, written by Games Investor Consultants analysts Rick and Nick Gibson for independent developer association Tiga, UK Trade and Industry and the DTI (now known as BERR), the report is a wide-ranging survey of the key territories in the games industry including territories such as the USA, Canada, UK, France, Australia.

It warns that UK studios might suffer thanks to reduced access to finance, rising development costs and pressure from more competitive, low-cost development sectors elsewhere in the world.

An exclusive abridged version of the report printed in this very issue of *Develop* (*starting on page 32*) reveals that the UK "faces some structural challenges in the medium term which threaten its ability to continues to produce strong original new IP". Specific factors include 'fundamental issues' related to finance. The report points out that both the private and public sector are ignoring the games industry, with finance companies in the former lacking confidence in games companies and the UK government failing to address that fact that subsidies in the likes of Montreal are attracting away investment.

"Outdated business models are creating a bottleneck..."

Some facts from the report – that the UK has slipped to fourth in the world's ranking of global games development countries, behind the USA, Canada and Japan, and currently hosts just 150 studios compared to 2002's 400 – have already snared some sensationalist headlines. But the report cuts through some of the doom and gloom associated with those points.

Describing the fall in the number of studios as an "extinction event Darwinian in outcome" the report says UK studios today are "better-run, more financially stable and effective developers". It also says the UK market is "currently growing, driven by publishers growing their studio headcount substantially and seeking experienced, technically proficient third party studios to supplement their internal capacity."

Nevertheless, studios should not get complacent as they may lose further ground in the next two years, warns the report: "Despite the advent of new distribution channels like casual games download services on consoles, poor access to finance, outdated commercial models and rising production costs are creating a bottleneck for new IP that will continue to struggle to get to market."

For our exclusive, in-depth version of the report, which includes an industry survey, the key lessons learned from ten major UK-made games IPs, plus analysis and stats on the UK industry and a look at how it compares to other major territories, turn to page 32.

WORLD*VIEW* GLOBAL NEWS > p08

Editorial
The race is on

To many observers, the news on these two pages – that Bizarre Creations, a notoriously independent developer, has been bought by a publisher – will validate a new Government report that says the UK's industry is victim to the increasing power of publishers based in other climes.

But perhaps that doesn't matter: these days I can't help but feel the distinction between independent and in-house is becoming hard to define in a creative sense.

Publishers seem to have understood that production workforces simply cannot be bled dry. And big commercial successes like *Halo 3* and *Bioshock* are teaching the rest that if you leave a developer to do what they do best it can pay off. That's why the likes of Disney and Activision are buying studios, but letting them retain their independent status. Intel is approaching things similarly with its own new game asset, Havok.

"Is independence a fair trade for creative freedom?"

So while some may worry (and rightly so – just look at the report starting on page 32) that territorially economic power is shifting away from the UK, in many respects the country's talent is gaining (or at least retains a lot of) creative power.

Bizarre and Black Rock, for instance, now have to manage the biggest challenge of all: creating new IPs that aren't just good, but are capable of being franchises in their own right, perhaps even becoming huge.

But is independece a fair trade for creative freedom? Yes, it's subjective (after all, consulting with brand managers isn't exactly 'creatively free'), but it's a compromise, and a good one at that. Because now developers can take advantage of the fact they understand game technology, and therefore games, a lot better than your average publisher footsoldier, and potentially be the real winners in any IP race.

Michael French
michael.french@intentmedia.co.uk

Activision: is just the

Surprise swoop for racing genre stalwart just another step in publisher's

Activision's European chief has told *Develop* his company won't turn down the chance to acquire another key developer in the territory, or possibly even build a studio from scratch, should the opportunity arise.

Speaking to us after the top five publisher announced it had acquired Liverpool, UK-based Bizarre Creations, Joerg Trouvain said that the company was "always looking at opportunities" that presented themselves as the company planned to boost its European business and strengthen its internal production resource across Europe and the world.

"Europe is the part of Activision that is growing the fastest and we want to develop the business further," he explained. "We'll weigh up any opportunity and see how it fits."

Acquiring Bizarre is a move that has certainly raised a number of eyebrows both amongst the UK development community and around the world, and shows another company making an important play to own part of the racing game genre, which Activision says is a 10 per cent chunk of the market. Last month Evolution and its satellite studio Bigbig were added to the Sony empire (*full story on page 8*).

"There were two reasons for the acquisition," added Trouvain. "The first was to expand our development capacity because that is the way to grow. The other is to enter the racing genre which we haven't been in before."

Bizarre will now be charged with devising a wholly new racing game for Activision, expected towards the end of 2009 at the earliest (although it has *The Club* to finish for Sega first), built with its proprietary technology. The studio will not be meddled with, either, said all involved. Founders Martyn and Sarah Chudley, who opened the studio in 1994, and other key Bizarre staff have signed up to become long-term Activision employees, but retain a large level of autonomy.

"Acivision's independent studio model will continue giving us creative freedom to build exciting new brands,"said Martyn Chudley.

"Bizarre Creations is not just a studio – it's one of the very best studios in the world..."

'Bizarre buy beginning'

plans to widen its development capacity, explains European boss Joerg Trouvain

Bizarre recently finished work on PGR4, but speeding off to become an internal studio has left publisher Microsoft Game Studios for dust

"Their financial support and marketing prowess will also enable us to build upon the commercial success that we currently enjoy, and take the company – and our games – to an even higher level."

Of course, in entering the driving game arena, Activision won't just be competing with publisher rivals in the charts, but also a host of other UK-based racing game specialists on the development front. Codemasters, Criterion, Sega Racing Studio, Sony's clutch of studios in or near Liverpool, Eutechnyx, Blimey! Games, Black Rock Studio – the list goes on.

Trouvain said Bizarre's talent will help it win the race, however: "It's true there is a lot of competition out there but Bizarre Creations is not just a studio – it's one of the very best studios in the world and I think the gain is that we will be able to create a racing game that is outstanding and deliver that to market."

DATA BYTES

€1.5m

The total amount available to developers based in the EU via the European Commission's 2007 MEDIA program. Studios can claim up to €100,000 each
Source: EU

40%

The percentage of the above fund which will be only available to projects which have a European cultural element

"It's a step in the right direction..."

Tiga CEO Fred Hasson praises the new fund, but points out it is 'ironic' that the EU should offer this when UK Government claims Brussels is the one blocking it from creating such funds

HALO IS 'BIGGEST ENTERTAINMENT LAUNCH'
Biggest ever, apparently, with the first day's gross till reciepts of $170m outstripping box office hauls by the likes of the *Spider-Man* and *Harry Potter* film franchises.

WorldView

Our regular round up of development stories from across the globe…

DUBLIN, IRELAND

What can $110m buy you? A *Develop* Award-winning middleware company that's synonymous with runtime physics, that's what.

Intel acquired Irish firm Havok for that tidy sum on the eve of its development conference last month, pledging to keep the firm an independent, if well-funded, subsidiary.

In an interview with us posted on *Developmag.com*, CEO David O'Meara pledged that acquisition helped keep Havok away from an Criterion/Renderware-esque pifall, and would help it not only push forward via global expansion of the customer base for its Physics, Animation and Behavior tools (*used in games like Dead Rising*), but also prepare the company as it looks to produce technologies for lower-end machines and handhelds while also helping Intel drive games activity for its big massively multi-core chips due soon.

"It's bullshit that guns in video games cause murders. The last thing I would ever do is hurt another person, and online I probably kill 200 guys a day…"

Halo fan and High School Musical 'heart throb' Zac Efron wages in to the 'games and violence' debate, and perhaps tries to butter up Rockstar for a GTAIV cameo

CHENGDU, CHINA

Ubisoft has opened a brand new studio in Chengdu, Sichuan, China that will grow to include 200 staff within the next 12 months.

Richard Tsao, senior producer at nearby (well, continentally) Ubisoft Shanghai has been promoted to head up the new outfit as managing director. Tsao will oversee the studio as initially focuses on internal outsourcing, but in time the team will be entrusted with development of online games for PC, console and handhelds.

Ubisoft said it chose Chengdu for its new studio due to the high volume of programming graduates – some 35,000 – coming out of local colleges each year. Its Shanghai office, which is the publisher's second-largest resource after Ubisoft Montreal, was opened in 1996.

For global games development news as it breaks head to *WWW.DEVELOPMAG.COM*

RUNCORN, UK

Evolution and its satellite studio Bigbig have been acquired by Sony.

Based in Runcorn and founded in 1999, Evolution developed the *WRC* series exclusively for Sony, most recently produced PS3 launch title *MotorStorm* and is currently working on that game's sequel and DLC.

Spin-off studio Bigbig opened in 2001 in Leamington Spa and has developed the *Pursuit Force* series of games for PSP and PS2.

MD Mick Hocking will now become group studio director for Evolution, Bigbig, and also SCE Worldwide Studios' nearby Liverpool Studio as well, reporting to SCE WWS VP Michael Denny. Founders Ian Hetherington and Martin Kenwright have, however, departed from the studio.

TOKYO, JAPAN

Although its main Tokyo Game Show announcements were the confirmation of the DualShock 3's existence, the acquisition of Evolution and Bigbig (*left*) and the delay of virtual world Home until early 2008, Sony also grabbed headlines by promising more development support for those making PS3 games.

Specifically, it plans to share the assets and know-how built up within Sony Worldwide Studios. Sony also plans to increase efficiency in development by putting in place new strategies and sharing the SN Systems tool chain, obtained through Sony's purchase of SN Systems in 2005.

The platform holder will also be seeking input from publishers by setting up an advisory board to meet on a regular basis.

A public announcement on Sony's home soil would appear to be a rebuttal to frequent claims that the PlayStation 3's massively parallel architecture can be a struggle to develop for, although all readers will remember that similar claims dogged the PS2 in its early years until developers became accustomed to the system.

BRISBANE, AUSTRALIA

Australian developer Auran is to put a special 'Australian Made' brand on the box for its new game *Fury* – the first games company to use the logo.

Fury and Auran's back catalogue will all be branded with the logo that promotes locally-made goods - the brand is traditionally used in the country on more traditional products.

Tony Hilliam, Auran CEO, commented: "As one of the oldest and largest independent game developers in Australia I'm very happy to see that Auran will be the first to use the Australian Made logo.

"Aussie gamers will now be able to support world class games that were developed right on their doorstep. From the birth of the idea, through to development, investment, packing, shipping and marketing, we do it all ourselves. With the support from our local market, we're really very proud to take our products to the world."

GLOBAL REPORTS

JAPAN: OFFICE EMERGES

Emergent has opened an office in Tokyo in order to aid the global push behind its Gamebryo, Emergent Elements and Emergent Platform tools. Japanese studio Acquire will manage the new operation on Emergent's behalf. The firm now has on-the-ground presence in all the major territories – it recently opened a base in Poland which joins other facilities such as its London and US offices.
www.emergent.net

USA: FIREBRAND LANDS

Racing specialist Firebrand Games has opened a new office in Merritt Island, Florida. The studio, which specialises in racing games for Nintendo platforms, says that the move will help them serve their US clients more efficiently. It already has a base in Glasgow which developed a DS game for Codemasters.
www.firebrandgames.com

UK: EMOTE GETS £4M

Recently established production company Emote has secured a £4m investment from venture capital firm Electra Quoted Management. The company, founded by iFone founder and CEO Morgan O'Rahilly and former Eidos development director David Rose, plans to use the cash to drive forward its activity behind developing and forging partnerships for cross-platform gaming.
www.emotegames.co.uk

SWEDEN: CAUSE AND SFX

Just Cause developer Avalanche has finished work on version 2.0 of its eponymous in-house engine. The new version of the Avalanche Engine has been architected exclusively for next-gen platforms and can simulate scalable landscapes and high-end characterisation, plus different climate zone effects for environments.
www.avalanchestudios.se

DENMARK: DEAD GOOD

Deadline Games is planning for a major ramp up of its production capacity after signing a massive deal with Eidos for ten new games. The three-year agreement covers ten games based on characters taken from the Hanna-Barbera studio licensed to Eidos by Warner Bros. The studio plans to manage the bulk of the development via outsourcing.
www.deadlinegames.com

THE DEALS

GAMEBRYO INSIDHE
New Zealand-based developer Sidhe, who created *GripShift* for PSP and the PlayStation Network, has signed up to use Emergent's Gamebryo engine for Wii and multiplatform projects. "Gamebryo complements our own investment in scalable, reusable, cross-platform technology," said technical director Tyrone McAuley.

TWINS TO WIN
German developer Twintime, based in Hamburg, has licenced Trinigy's Vision Engine for use in the production of its new action game *Odessa Twins*, due out on PC next year.

<SNAPPY HEADER HERE>
Nokia's SNAP platform has this month gained Japanese support, with mega-publisher D3 using the technology for the mobile version of its popular console IP *Earth Defence Force* and G-mode signing up for its online chess title *Chess a Moment*.

GG TORQUE THE TORQUE
Indie-focused technology developers GarageGames has had a majority stake bought by IAC, who aim to use GG's position as a trusted publisher of indie titles to launch a new casual game web portal. GarageGames insist that the takeover won't affect the development of its various Torque engines in any way other than positively, promising a series of exciting announcements in the coming months.

DO CRY FOR ME, KOREA
Korean upstart developer Reloaded Studios has signed an agreement with Crytek to use CryEngine 2 for their first game, an action strategy MMORPG. The deal marks the third company in recent months to sign the engine for the development of massively multiplayer titles.

BRIDGING THE OGAAP
A group of MMO developers, including Icelandic *EVE Online* developers CCP, have signed up to form the Online Games Alliance Against Piracy group, hoping to stop piracy in massively multiplayer titles – specifically the activity occuring in China. The group is targeting "operators who set up private servers and macro programs that mimic the most popular games."

DEVELOPER CHART

OUR MONTHLY RANKING OF THE WORLD'S STUDIOS BASED ON UK GAMES SALES

SEPTEMBER 2007

THIS MONTH	LAST MONTH	STUDIO DETAILS	BEST SELLING GAME
1	■ 1	NINTENDO	WII PLAY (WII)
2	▲ 4	GAME FREAK	POKEMON DIAMOND (DS)
3	■ 3	TRAVELLER'S TALES	TRANSFORMERS: THE GAME (PC, XBOX 360, PS3, PS2, WII)
4	NE	2K BOSTON/2K AUSTRALIA	BIOSHOCK (XBOX 360, PC)
5	▲ 7	MAXIS	THE SIMS 2: PETS (PS2, WII, DS, PSP, PC, GC, GBA)
6	▲ 20	HUDSON	MARIO PARTY 8 (WII)
7	▼ 2	EA UK	HARRY POTTER & THE ORDER OF THE PHOENIX (PS2, PS3, WII, XB360, PC)
8	■ 8	UBISOFT (MONTREAL)	SURF'S UP (PS2, PS3, WII, XBOX 360, PC)
9	▲ 10	EA CANADA	NEED FOR SPEED: CARBON (PC, PS2, XBOX, GC, PSP, XB 360, WII, PS3)
10	▼ 9	VICARIOUS VISIONS	SHREK THE THIRD (DS, PSP)
11	▲ 22	UBISOFT (FRANCE)	TOM CLANCY'S GHOST RECON: WARFIGHTER 2 (PS3, PSP, XBOX 360)
12	▼ 5	AMAZE ENTERTAINMENT	SHREK THE THIRD (PS2, WII)
13	■ 13	EA REDWOOD SHORES	TIGER WOODS PGA TOUR 07 (PS3, XB360, WII, PSP, XB)
14	▲ 15	OFFICE CREATE	COOKING MAMA (DS, WII)
15	▲ 32	LONDON STUDIO	SINGSTAR '90S (PS2)
16	NE	ATLUS SOFTWARE	TRAUMA CENTER: SECOND OPINION (WII)
17	▼ 11	CAPCOM	RESIDENT EVIL 4 (WII,PS2,GC)
18	▲ 21	SONIC TEAM	SONIC RUSH (DS)
19	▼ 16	KONAMI DIGITAL ENTERTAINMENT	PRO EVOLUTION SOCCER 6 (PS2, PSP, XB360, DS, PC)
20	▲ 44	HB STUDIOS	RUGBY 08 (PS2, PC)

CHART KEY: ▲ UP ON LAST MONTH ▼ DOWN ON LAST MONTH ■ NO CHANGE IN POSITION **NE** NEW ENTRY ☐ INDEPENDENT STUDIO

CHART COMMENT

Looking at last month's charts, it would seem that Nintendo's Touch Generations! strategy is once again paying off, with strong sales of *Wii Play*, *More Brain Training* and *Big Brain Academy: Wii Degree* helping the Japanese giant secure a second consecutive number one in our developer's chart.

Keeping with the Nintendo theme, this month also sees *Pokemon* creators Game Freak hopping two places up to tag behind its publisher at number two, as *Pokemon Diamond* and *Pearl*'s obsessive-compulsive old-school RPG charm continues to win over playgrounds across the country.

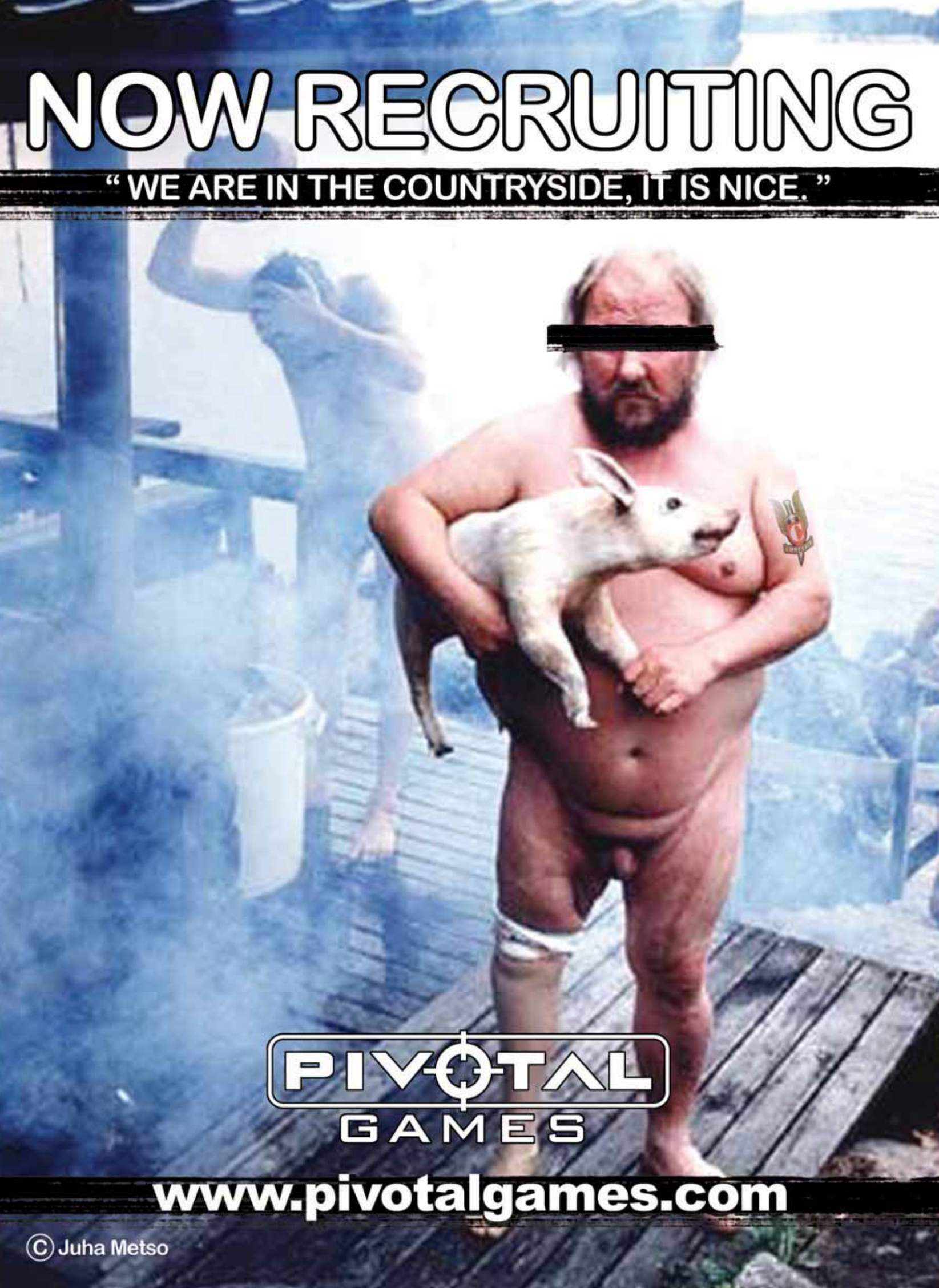
Eagle-eyed readers will spot that, actually, all but one of the Japanese companies in our chart have Nintendo to thank for their success – the now de-spasticed *Mario Party 8* helps Hudson move up 14 places to number six, while the Wii re-release of *Resident Evil 4* keeps Capcom from dropping off the bottom. Similarly, impressive sales of the Nintendo-published *Trauma Center: Second Opinion* hurls Atlus into the chart as a new entry.

Canada may only be represented by one entry this month – HB Studios at number 20 – but at least it can console itself with the fact that the impressive performance of its *Rugby '08* title, presumably linked in to the growing Rugby World Cup fever, has made the studio this month's highest climber, moving up 24 places in the space of a month.

Highest new entry, though, goes to 2K Boston and 2K Australia, whose mega-hit *Bioshock* has proved that creative-driven games can sell just as impressively as licenced fayre. *Develop* also extends its applause to the teams for creating a game where you can kill little girls carrying giant syringes, finally allowing us to get our own back for years of expensive therapy and electric shock treatment.

ChartTrack

ELSPA Entertainment and Leisure Software Publishers Association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AN ICON AND AN EPIC

Richard Burton is back on stage in Jeff Wayne's "The War of the Worlds" Live Tour 2007

Courtesy of Image Metrics

"Miraculous Virtual Burton..." - The Sydney Herald

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Image Metrics, based in Santa Monica, CA and Manchester, UK, develop and deploy innovative technologies for digital media, and are the leading provider of performance-driven facial animation to the entertainment and gaming industries. Founded in the early part of the twenty-first century by a team of PhD computer vision scientists, Image Metrics also specialize in digital characters and effects, real-time engines and content analysis.

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You Can't Learn Games

Get out of the classroom and in front of a computer to hone your games-making skills – game education is fundamentally flawed, says our pseudonymous design columnist…

It is almost inevitable, when first meeting someone with a familial relationship to a gamer between the ages of 12 and 20, that I am informed that this relation is interested in working in the games business. These well-meaning relations usually appear to believe that this interest in electronic entertainment is somehow unique and are invariably of the opinion that an inclination for spending large quantities of time attached to an Xbox indicates a probable talent for whatever it is that we do in the game industry.

Aside from being mildly annoying – the conversation wasn't that bad the first 100 times, but I'm kind of tired of it now – it indicates a powerful demand for the sort of credentials that the kind of people who believe grades and test scores inherently translate into ability seek before pursuing employment. Hence the existence of numerous game development degrees and classes in the history of gaming and even the July announcement that the British government intended to introduce a 'video games GCSE'.

Unfortunately, this is a spectacularly stupid idea. While it's certainly helpful to have an encyclopedic knowledge of games when you are designing games, constructing levels or creating concept art, that is only a very small part of the required skill set no matter what aspect of the design and development process you are considering. And more to the point, education is almost entirely irrelevant, as can be easily demonstrated by the backgrounds of many notable games developers, past and present.

Everyone knows that Richard Garriott was not only programming games, but publishing them while he was still in school. Far fewer people know that Chris Taylor, the founder of Gas Powered Games, didn't attend college before going to work programming games for EA Canada. While Dr. Johnny Wilson's (who I interview on the next page) collection of degrees is impressive, I'm not sure that it was central to his guidance of Computer Gaming World during its Golden Age, although they did come in handy for those with an Aramaic translation emergency.

"Education is almost entirely irrelevant as demonstrated by the backgrounds of many notable games developers…"

A few years ago, I was approached by a European headhunter and asked to provide a CV for a position that sounded interesting. I received a phone call a few days later, and they seemed to be a little suspicious. After all, how could I possibly have spent ten years designing and developing games when my training was in economics? It took me an hour to convince them that sometimes academia doesn't quite keep pace with the real world.

Game development isn't about static knowledge, it's about dynamic creativity and that is something that can't be taught anymore than height or hand-eye coordination. I have hired more than a few game artists over the years, and inevitably I have found that the best test for a game artist is to give him a piece of paper, a pencil. It doesn't matter if you can recite the latest 3D Studio Max manual backwards and

forwards if you have no vision; no amount of Photoshoppery is going to hide the fact that your characters look as if they've been derived from an amalgamation of the last three games you happened to play.

As for game programming, most of what is taught in Computer Science is outdated, and aside from the necessary mathematics, a mindset suitable for bug-hunting is far more necessary than any textbook knowledge. Game design, being even more inherently nebulous than either programming or art, is particularly susceptible for scholastic abuse and I can't imagine any publisher sitting in a greenlight meeting, looking at an exciting design from a successful designer, and saying "well, this would be a great game and we could probably sell a lot of them, but we'll have to reject it since he doesn't have a degree in game designology".

If you want to get into games as a career, then the best thing to do is to get into games. If you want to be an artist, draw! If you want to be a programmer, take math classes, read programming manuals and start programming. If you want to be a game designer, write stories, analyse existing games and practice writing game designs. Get your foot in the door as a tester or a marketing assistant. Listening to me or anyone else yammer on about how we designed on a DOS-based sound library instead of a Windows one might be interesting, but it isn't going to get you into the games business.

To paraphrase Nike, don't learn it, just do it.

The Alpenwolf *is a professional game designer who has been active in the industry for 17 years and designed games for some of the largest American and Japanese publishers. He has been known to visit Ironforge in the company of a large white wolf. design@alpenwolf.com.*

Q&A: : Dr Johnny Wilson

Dr Johnny Wilson began writing for Computer Gaming World magazine, the most influential US magazine in the games business for more than a decade, in 1982. From 1986 to 1991, he was an Associate Editor before being named Editor-in-Chief in 1992. He now teaches the history of games and is also EVP, Content & Community at Greg Costikyan's Manifesto Games

What are some of the things you've seen change about the games business since you left *Computer Gaming World* in 1999?
The biggest thing is the budgets, the budgets and the budgets. The reason for that, of course, is the need for more graphics. Pushing more polys means you need much bigger game crews than you had before.

Has this made the games any better?
No, in fact, I think it's made them worse. The emphasis is all on looks, not as much on innovation, play balance or clever gameplay mechanisms. The Hollywood analogy would be more special effects, less story. The scripts are weaker and the special effects are better. I can't say that's true all the way across the board, there are exceptions like the EA Sports line which year after year constantly try to add realistic sporting elements.

Is there a solution for this, or will it continue in this direction indefinitely?
I don't see how it can, because eventually we'll reach a point of diminishing returns. The catch-22 is that if you have a big budget, you have to sell to more people. That means you have to have a concept that sells on television and you can't sell things like play balance on TV, you have to sell graphics and special effects. Also, in the retail channel, there's an emphasis on quick turns, so now all the retailers want is bestsellers. To think thought the focus on bestsellers was a problem in the '90's.

You've been involved with Manifesto Games, what is the manifesto?
It's the recognition that the big budget, big volume games will not appeal to the classic gamers. It's

"Eventually people will become more interested in cerebral processing power than graphical processing power..."

understanding that eventually people will become more interested in cerebral processing power than graphical processing power, and more interested in the human element than in special effects. What we have to see is a return to the more classical games, the strategy games, the adventure games, even the wargames.

I was talking to Kurt Busch at Sega and he said he'd like to see the classic adventure game make a comeback.
I would too. One of the great joys of being involved with Manifesto was looking at adventure games like the *Delaware St. John* series. That series wasn't a retail seller, it didn't have the high quality graphics, but it had a good storyline, a few clever innovations and it gave the player the satisfaction of solving puzzles. The graphics were retro, but I don't think that's necessarily bad.

Do you see a continued future for independent designers and developers?
The only logical approach for them is online sales direct to the consumer. Eventually, there has to be a solution. The problem is that there is still no serious way to capture attention for those products.

What are some of the differences between *CGW* and the modern game magazines?
I was privileged to be part of *CGW* when we were a cross between a consumer publication and a trade publication. We focused on the hardcore hobbyist and we knew they didn't just want to know about the games and how to beat them, but about the people and the business behind the games as well. We didn't rush game reviews out the door, we played them all the way through and wrote about them in detail. But eventually, there came to be a different emphasis, more of a tabloid emphasis rather than a journalistic one. Now, when you look through the magazines, they're more like catalogs. It's all sound bites and sight bites made for skimming.

Were you disappointed to see Ziff Davis shut down *CGW*?
I think it was time. It had lost its mission. It was like the athlete that didn't know when to retire. Unfortunately, for those of us who like to read, there isn't a publication out there like it now.

You've got a doctorate in theology and your interests are famously diverse, so what is it about games that continues to hold your attention after all these years?
Games are the only art form in which you can determine the flow of the presentation. The beauty of a game, unlike a movie, a book, or a play, is that it places the decisions in your hands and allows you to experience the consequences of those decisions.

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VARIABLE DECLARATIONS

by Owain Bennallack

Cry Havok and unleash the dogs of doubt

THINGS WERE VERY DIFFERENT when we launched *Develop* as a monthly back in 2000. Then editor, I wore flares to the office and had sideburns. Jon Jordan didn't yet dye his hair red to hold back the grey. And young Michael French hadn't even sat his GCSEs.

More pertinently, even as game development became exponentially more complicated and costly towards the tail end of the 1990s, it looked like one way of addressing that problem – middleware – had finally come of age. We dedicated many pages of those early *Develops* to outlining the case for middleware, and to discussing its pros and cons with game developers.

Fast-forward to today: physics API maker Havok, itself founded in 1998, has just been bought by Intel for, it's rumoured, over $100 million. Hardly a sum to be sniffed at. So, champagne in Dublin, and high fives all around for those who thought we'd see the emergence of a rich and varied ecosystem of middleware products that independent game developers on a budget could pick-and-choose from?

Hardly.

Intel hasn't snapped up a physics middleware company because the sector is thriving and it wants to dip a toe in the oil well. It's picked up *the* physics middleware company, for uncertain ends that we'll briefly consider in a moment.

The return to Havok's investors may or may not be more positive since 1998 – its shareholders and cash position have changed a lot over the years, and this isn't the article to work out who's made what in the end – but Havok's particular success has emphatically not emerged out of a rich middleware ecosystem. Quite the opposite.

Most recently used in the likes of *Bioshock* and *Crackdown*, Havok's software is rather the latest example of a rare success in a middleware landscape strewn with relative or utter failures.

Similarly successful to Havok was Criterion's Renderware; it was snapped up by Electronic Arts in 2004 after achieving a commanding position in the market for total engine middleware thanks to

"While Intel isn't in the business of making games, it's hardly a neutral party..."

adoption by publishers and thereby developers for PS2 games. Whilst EA apparently intended to keep the middleware business going on a semi-independent basis, cynics were proved right – Renderware withered on the vine under EA and is no longer available to new licensees.

EA's purchase of Renderware highlighted a problem with success in the middleware market, which was that a publisher or platform holder snapping up a popular middleware software hugely disrupted its rivals.

Buying a small but competent middleware company can even make sense to a publisher simply as an alternative to R&D. That was what happened when Activision acquired Demonware earlier this year. For rivals who chose Demonware instead of developing their in-house networking smarts, the result was much the same – a dusting off of drawing boards.

Intel says Havok will carry on as an independent tools maker and continue to support non-Intel platforms – to which everyone will shrug, and wait and see. From EA's acquisition of Criterion to Sony's of SN Systems, history doesn't bode well.

Indeed, while Intel is not in the business of making or publishing games, it's hardly a neutral party. It's waging its own wars with the likes of AMD/ATI and Nvidia in the CPU and GPU space, and seeing off a fading threat from plug-in physics accelerators. What's to say Havok won't be a pawn in attempts to boost the utilisation of its multi-core technology, even if the strategy proves to be a more discrete one of 'optimise for our technology guys' as opposed to 'don't bend over backwards for theirs'?

Having said that, Intel has loads of blue sky investments and it routinely pumps out hundreds of millions in funding, so it's got the infrastructure to accommodate an independent Havok and its smart engineers, who've already proven their ability to exploit multicore platforms. Time will tell.

The more general point stands: the idea of middleware as a universal panacea for indie developers looks broken. It's proven very hard to make money as a pure middleware business, and those companies who've achieved a measure of success have chosen to extract the value so created by selling themselves off rather than growing bigger and better.

As a result there's no stuffed storefront of middleware to choose from, little competition, and scant stability for anyone wanting to embrace the off-the-shelf route. Seven years on, it looks like independent developers who make their own technology in-house have won the day, with all the challenges for scale, finances and recruitment that entails.

Owain Bennallack is executive editor of *Develop*. He edited the magazine from its launch until its February 2006 issue. He has also worked at *MCV* and *Edge*, and has provided consultancy and evaluation services to several leading developers and publishers. He is also chairman of the *Develop* conference advisory board.

DEVELOP DIARY

YOUR COMPLETE GAMES DEVELOPMENT EVENT CALENDAR FOR THE MONTHS AHEAD...

OCTOBER 2007

E FOR ALL EXPO
October 18th to October 20th
Los Angeles Convention Center, USA
www.eforallexpo.com
IDG's take on E3 – but specifically this is a consumer show.

GAMEHOTEL ZURICH
October 20th
Zurich, Switzerland
www.gamehotel.net
The artistic, pop culture-spun games festival returns to Zurich for a second helping of interaction with the gaming public from luminaries such as Jade Raymond, Doug Church and Harmonix's Alex Rigopulos.

LONDON GAMES FESTIVAL
October 22nd to October 26th
www.londongamesfestival.co.uk
A week-long series of events designed to raise the profile of the games industry.

BAFTA GAMES AWARDS
October 23rd
Battersea Evolution, London, UK
www.bafta.org
The British Academy's take on a gong show, with a move to a bigger venue and renewed developer focus for 2007.

WORKING WITH GAMES
October 23rd
BAFTA, London, UK
www.tiga.org
One of Tiga's London Games Festival tie-in events, the Working with Games day aims to explore the relationships and business opportunities available between games, TV, film and advertising, with reps from the likes of TT Games, Eidos, Warner Brothers and Endemol set to discuss their activity speak.

VIRTUAL WORLDS FORUM
October 23rd to October 26th
Kings Cross Freight Depot, London, UK
www.virtualworldsforum.com
The first pan-European virtual worlds conference will provide a place for brands and developers to meet and discuss the business prospects in online environments.

NOVEMBER 2007

IGDA LEADERSHIP FORUM
November 8th and November 9th
Airport Marriott, San Francisco, USA
www.igda.org/leadership
The IGDA and its Production SIG join together to host an event dedicated to advancing the art of game production and management, tackling topics such as scheduling, post-mortems and team management techniques. Bioware's Ray Muzyka and Greg Zeschuk and Double Fine's Tim Schafer are among the confirmed speakers.

DECEMBER 2007

LYON GDC
December 3rd and December 4th
lyongdc.com
Game Connection and CMP team up to host 60 classes over a two-day period, running concurrently with the Game Connection 'business matchmaking' event in France (below).

GAME CONNECTION EUROPE
December 4th to December 6th
Le Palais des Congrès de Lyon, France
www.game-connection.com
The popular Game Connection event returns for another year of games industry speed dating par excellence.

FEBRUARY 2008

GDC 08
February 18th to 22nd
Moscone Centre, San Francisco, USA
www.gdconf.com
GDC returns a month earlier than usual, with its usual blend of sessions, business opportunities and expo show-floor fun. The call for papers is now open.

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Tiga: 'We're hosting the key LGF B2B event'

There's just under a month to go until 2007's London Games Festival – and trade association Tiga has been putting together a key event for studios.

Working with Games takes place on the October 23rd and aims to explore the relationships between games, TV, film and advertising. With the media industries looking to recapture some of the audience lost to gaming, the day-long coference will provide case studies, talks, panel sessions and networking opportunities regarding the corss over between mediums. Reps from the likes of TT Games, Eidos, Ubisoft, Warner Bros and Endemol are set to speak.

Fred Hasson, CEO of Tiga, describes the event as "the key B2B event during the festival". Games developers should take especial note, Hasson told *Develop*.

"This event representes a lot of exciting opportunities for developers and they should be there," he said, citing the Ubisoft's efforts to move into CG movies and Warner Bros' new attitude to games as key proof of how games is sharing the stage with 'big media'. "Plus, there's plenty of money to be made in this field," added Hasson.

LGF isn't short of other events for developers, however.

The London Game Career Fair, running from October 23rd to 24th at the Old Truman Brewery on Brick Lane, is exactly as it sounds.

Elsewhere, the Virtual Worlds Forum provides a meeting place for developers and brand-holders wanting to explore the opportunities that virtual worlds provide. The event, which takes place between October 23rd and 26th speakers include NCSoft and devs from Sony's Home platform group.

The BAFTAs also take place during the main festival week, on October 23rd.

For more information on the festival visit **www.londongamesfestival.co.uk**

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STUDIO PROFILES

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OXYGEN STUDIOS — LONDON, UK

FOUNDED: 2007

KEY PERSONNEL:
Andy Squirrell (development director)
Harvey Gilpin (technical director)
James Vale (art director)

SOFTOGRAPHY:
King of Clubs (Q4 2007)

CURRENTLY WORKING ON:
Cheggers' Party Quiz
Alan Hansen's Sport Challenge
One unannounced DS title.

CONACT DETAILS:
www.oxygen-studios.com
info@oxygen-studios.com

Like the rest of this month's profiled studios Oxygen's new London-based development team has one priority: development games for Nintendo's megahit Wii and DS formats.

Unlike the rest of this month's spotlit teams, however, the team boasts a unique approach to product management. The team develops its games using Oxygen's 'key' system which outlines what's epected from the studio with the team given free range to fulfil the brief however needed.

"We get a very clear brief, and we never hear 'Oh, that isn't what we were expecting' or 'Oh, we've changed our minds'," says development director Andy Squirrel. "Our job is to find creative, effective ways to deliver on the brief, and we only get 'interference' from the publisher if we start to deviate from that."

This alternate relationship between developer and publisher is informing the production of a number of new games, all of which are massmarket propositions for the Wii and DS, to be released across the sport and quiz game genres.

SIDHE INTERACTIVE — WELLINGTON, NEW ZEALAND

FOUNDED: 1997

KEY PERSONNEL:
Mario Wynands (managing director)
Tyrone McAuley (technical director)
Stuart Middleton (creative director)
Andy Satterthwaite (executive producer)

SOFTOGRAPHY (SELECTED):
GripShift (PS3 - 2007)
Jackass: The Game (PSP, PS2 - 2007)
GripShift (PSP - 2005)
Rugby League 2
(PC, PS2 - 2005; Xbox - 2006)
NRL Rugby League
(PC, Xbox, PS2 - 2003)
Adidas Football Fever
(PC Online Download - 2002)

CURRENTLY WORKING ON:
Speed Racer (Wii, PS2, 2008)

CONACT DETAILS:
www.sidheinteractive.com
info@sidheinteractive.com

When you consider Sidhe, you discover an ambitious independent studio who has, perhaps unintentionally, managed to explore new territrory for studios. It was one of the first independents to produce a PlayStation Network game, for instance, and the company was founded by three friends with a Sony Net Yaroze homebrew kit.

According to MD Mario Wynands the secret to the team's success has been its work ethic, honed during those early years.

He says: "Early years were tough as we created content, built infrastructure, and searched for that elusive publishing deal. Perseverance and staying open minded helped get us to the point where we had a viable company on our hands."

Good proof of this is that Sidhe is one of the first to be producing a game for the resurgent Warner Bros Interactive. *Speed Racer* arrives on the Wii next year.

"Their approach has been very collaborative and supportive, and we have a very open dialogue surrounding development," explains Wynand.

SHIN'EN

MUNICH, GERMANY

FOUNDED: 1999

KEY PERSONNEL:
Manfred Linzner (co-founder),
Bernhard Wodok (co-founder)

SOFTOGRAPHY:
Miss Spider: Harvest Time (DS - 2006)
Nanostray (DS - 2006)
Maya the Bee: Sweet Gold (GBA - 2005)
Iridion II (GBA - 2003)
Iridion 3D (GBA - 2001)

CURRENTLY WORKING ON:
Nanostray 2 (DS)
Strawberry Shortcake (DS)

CONACT DETAILS:
www.shinen.com
info@shinen.com

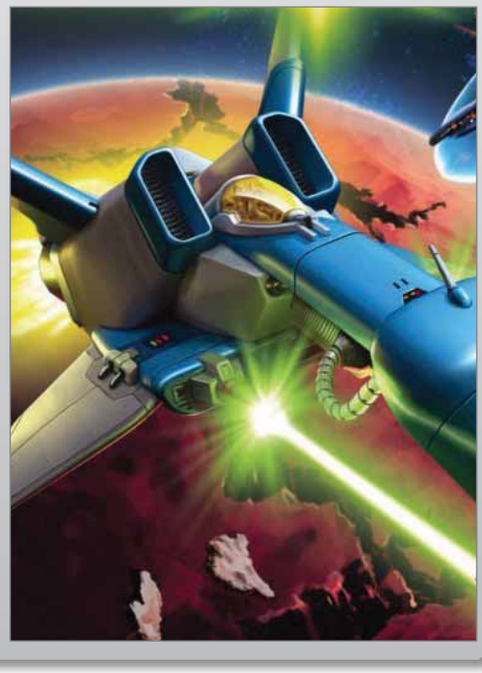
Shin'en Multimedia might not be a name you've heard of, but there's a good chance that you have heard its work – because in the eight years the company has been in business, it has delivered audio middleware and created soundtracks for over 250 hand-held games.

Founded in 1999, the company started as a music specialist with a contract from Core Design to produce the soundtrack for the Game Boy Color version of *Tomb Raider*.

"In those days there were no outsourcing companies available for Game Boy music, so we had an excellent position in the market," says studio co-founder Manfred Linzer.

This lead the team into developing GBC games themselves, before progressing onto the Game Boy Advance and eventually the Nintendo DS.

In addition to continuing with the DS, the studio recently announced that it will also be developing Wii games, the first time it has developed a game for a console system.



North West - Games Programmer
This developer has a strong history of producing AAA games, and they're looking for an **experienced games programmer** to join them. Ideally you'll have at least **two years experience** at a recognised studio, and you'll be eager to build on your existing skill set in any areas ranging from **AI** or **physics** through to **graphics**, **audio** or **gameplay**.

Scotland – Concept Artist
AAA studio, major **critical** and **commercial success** with its first release. Need we say more? Looking for a concept artist to come on board and assist in the development of their **MMO**. You'll have industry experience and an ability to work with **Photoshop** and **Illustrator**, creating **finely detailed concepts** from **multiple viewpoints**.

North East - Senior Games Designer
This **multinational** client is currently working on a number of titles, and is looking for a top notch games designer with **at least 4 years experience** to come on board, join the team and make great games. An opportunity to add a premier level developer to your CV!

North America – Creative Director
This AAA developer is on the look out for a new Creative Director to work on the kind of games that **hog the headlines** at events like **E3**. You'll get to work with some of the most **creative minds** in more than just the games industry – **movie studios** will play no small part in your career at this place.

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Jonathan Kay, Producer, Pivotal Games Ltd

Europe – Senior AI Programmer
Working with the studio behind one of the most successful **military themed franchises** in the history of games, you'll work closely with designers on **brand new military related IP**. It's an **English speaking office**, with a generous salary and relocation package and a fantastic range of ancillary benefits.

South West - Producer
Working with the studio behind one of the most highly regarded and hugely successful **military** franchises ever conceived, you'll get to **produce** the **nextgen** version of this AAA series. Ideally you'll have worked on **one published game** as an **internal producer**, or worked across several titles as an external producer.

Midlands – Assistant Lead Artist
This AAA studio is looking for an assistant lead artist to work on their next title in one of the most highly regarded **racing series** around. You'll get to work alongside a hugely talented creative team in **defining the look** of its **next generation racer**, with the opportunity for **project bonuses** and **flexible hours**.

South East (Inc London) – PC Programmer
This studio has created some of the **best racing games ever made** and will give your CV a chance to **really stand out**. They're looking for someone confident in all aspects of PC programming to provide their skills in areas such as **graphics**, **gameplay**, **AI** and **physics**.

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BETA

DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

"Don't try to become like me!"
Advice from *Katamari* creator Keita Takahashi, p38

Xbox Live Arcade 101: Edery quizzed

p24

Brighton's Rock: Disney's UK studio

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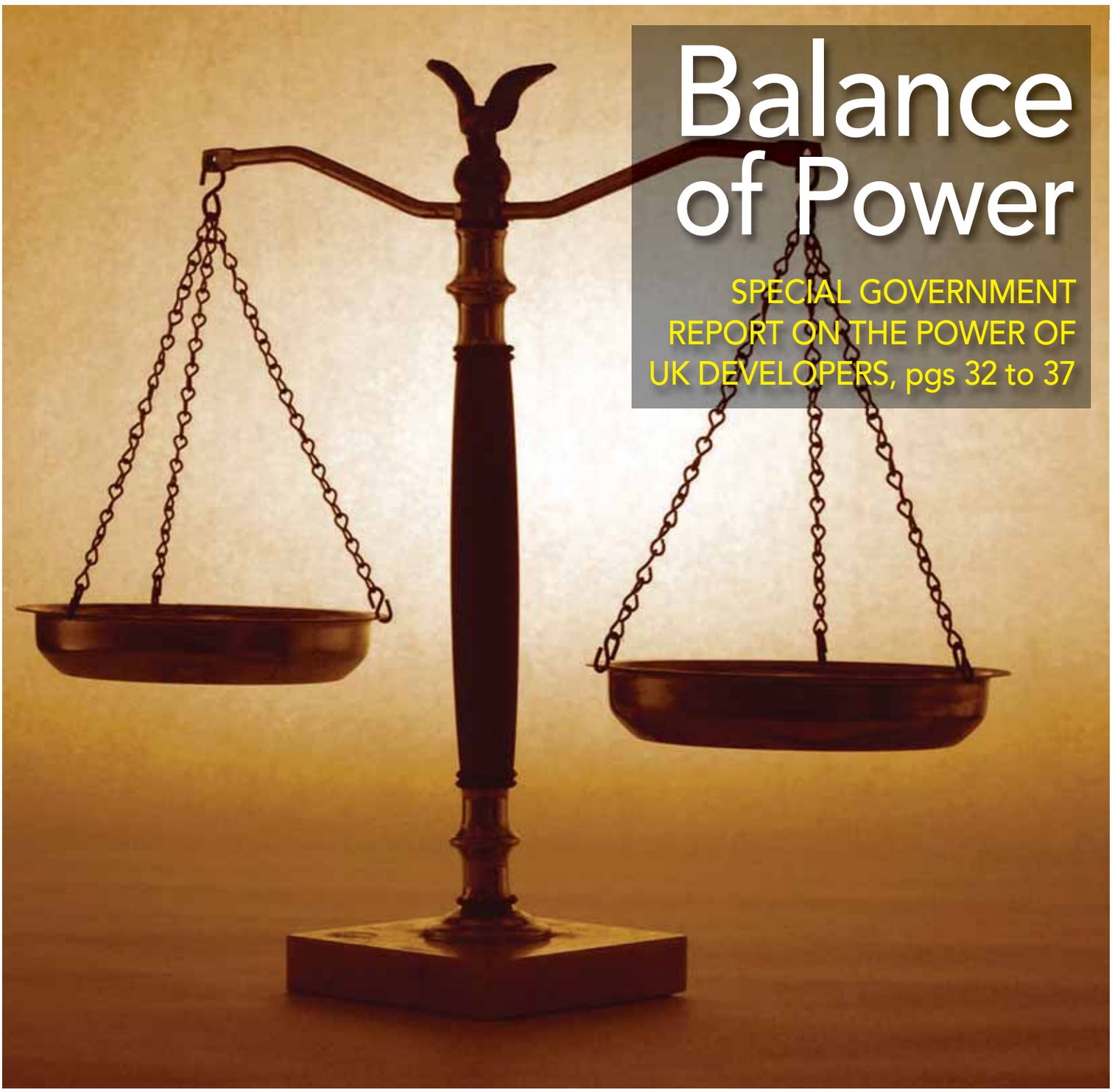
A new methodology for designers

p43



Balance of Power

SPECIAL GOVERNMENT REPORT ON THE POWER OF UK DEVELOPERS, pgs 32 to 37

Live stock

With Xbox Live Arcade's three-year anniversary nearing, Michael French spoke to the platform's Worldwide Games Portfolio Planner, David Edery, to get an update on what the service can offer developers…

Firstly, can you take us though the process involved in submitting a game to Microsoft and seeing it up on Xbox Live Arcade?
There are two routes onto the platform.

One: you work with a major publisher, and they handle all the usual things a publisher does (such as getting you ratings in all the major territories, managing testing, and shepherding you through Microsoft's certification process) Publishers still need to get their concepts approved by Microsoft, but most of the established publishers have a very good understanding of what we expect from a submission at this point.

Or, two: you submit directly to the Xbox Live Arcade (XBLA) team. In which case, you'll need to sign an NDA and work with a biz dev manager to fill out a concept submission form. We generally expect such submissions to include (at least) a very detailed description of the game, plus screen mockups, but we prefer a gameplay video or, better yet, a playable prototype.

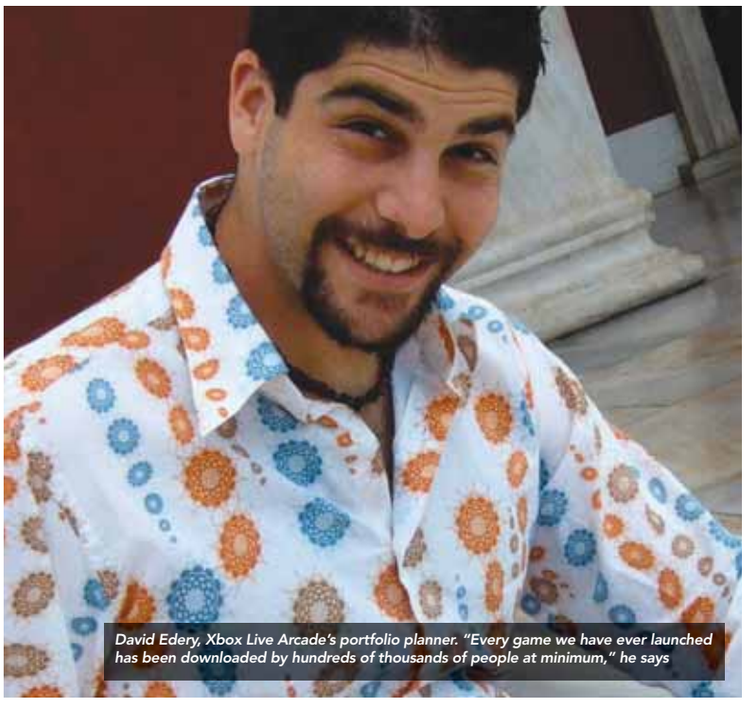
Regardless of the path a developer chooses, once a concept is approved, it generally takes about nine months to get the game on the service. We've had games completed in as little as six months, and some that have taken over a year to complete. The vast majority of this time is spent on development and testing. It isn't simply a case of making a good game (if such a thing can even be called simple!) You need to make a good game; you need to integrate with Live; you need to put together a fantastic trial experience that will encourage sales.

From a production point of view, many view XBLA games as 'cheaper, quicker and easier to make' than your normal big budget boxed game – how much of that statement is true?
Sure, in some regards an XBLA game is 'cheaper, quicker, and easier' to develop. You don't have 100-man teams with a $20m budget working on XBLA games for over two years the way you do with triple-A console games. XBLA games tend to have anywhere from three to nine-man development teams, with development budgets ranging from as low as $100k for the simplest of ports to $900k for the most ambitious of projects. I'd say that average development budgets are somewhere around $450k. And of course, since XBLA games are digitally distributed, the hassles of physical distribution are a non-issue.

"Anyone who thinks you need 5GB to make a game hasn't played on a DS lately…"

There are important development issues to consider, however. Because consumers can try an XBLA game before they buy it, developers need to produce an experience that literally sells itself within minutes. Designing, engineering, and testing a great Live experience is also very important, and can extend development schedules if it isn't adequately planned for in advance.

How long until we see an XBLA game made with a multi-million dollar budget?
We're committed to maintaining XBLA as a place where developers can effectively compete without spending millions of dollars. As long as that holds true, XBLA will attract more than its fair share of innovative games. Those games may not be the most consistently profitable, but over the long-term, they make the difference between growth and stagnation… between happy consumers and bored consumers.



David Edery, Xbox Live Arcade's portfolio planner. "Every game we have ever launched has been downloaded by hundreds of thousands of people at minimum," he says

There are concerns that some games will be declared finished but take a while to appear. What's the cause for the bottleneck in releases?
Rumors of bottlenecks in the XBLA title schedule are precisely that: rumors.

Once an XBLA game clears certification, it almost always makes it onto the service right away. In fact, I'm proud to say that in the entire life of the service, we have never held a title for more than a few weeks. We keep the pipeline of approved games reasonably steady precisely so that we never find ourselves in too nasty of a schedule crunch. That said, developers (of their own accord) occasionally choose to delay their games for a variety of reasons. For example, they may not wish to go up against a similar title, or they may desire more time to improve gameplay.

QA and certification seems to be a key part of the XBLA. Can you talk us through what that process entails and what studios should do to avoid potential problems?
The best way to get through certification smoothly is to work closely with your publishing partner. If you're working with a third party publisher, they know how to handle certification – they've been doing it for years. Likewise, if you're working directly with the XBLA team, then you have a dedicated project

Don't be fooled by filesize limits, says Edery. Undertow (left) fits the quotient and is made with UE3. Microsoft is keen to create a diverse profile of new and old games, so original IP will sit alongside core classics like the upcoming Rez HD (above)

manager and test manager who will do everything they can to help you make a great game and get that game through certification quickly.

Ultimately, developers need to understand that the certification process helps us offer a consistent experience to customers and keeps our ecosystem healthy. In exchange, XBLA developers enjoy an average conversion rate that is *many times* higher than conversion rates for downloadable PC games. Seems like a pretty good tradeoff, if you ask me. I think it's telling that many now-veteran XBLA developers are working on their second, third or fourth game for us.

How strongly does Microsoft assess the 'quality' of a game? Taste are subjective, but do you have certain standards by which titles are judged?
We do try to set a quality bar, but you're right to note that tastes are subjective, and we're very sensitive to that. For XBLA to be a long-term success, we need to occasionally take chances on games that defy convention. Nobody wants to be the person who turned down *Katamari* because 'the art was weak'.

When we judge 'quality' we try to stick with objective measures. For example: if the game being proposed is a multiplayer game, does it support Live? If not, is there a good reason, or is the developer simply unwilling to put in the extra effort?

Ultimately, quality is just one factor out of several that we weigh when considering a proposal. We also care very much about diversity of content. A high quality (but completely undifferentiated) clone of an existing XBLA title is no more likely to be approved than a 'low quality' title.

Are you able to tell us what the revenue share is like on an XBLA game when it comes to the amount a developer gets from a game bought from the service and the amount that goes to Microsoft?
We don't publicly disclose that.

How much does that figure change when the developer's game comes to the service via a publisher?
That's between the publisher and the developer.

On that point: a) how does it work with publishers and XBLA? (do they get any preference/guaranteed slots in the release schedule, etc.) and b) would you recommend a developer go to Microsoft or a publisher on an XBLA game in the first instance?
We don't give publishers guaranteed slots or preferential treatment. Their games must be approved, just like those of independent developers, and we have rejected publisher submissions in the past. The only major difference is that we don't need to take into consideration our own internal bandwidth when evaluating publisher submissions. In other words, if a publisher submits a high quality game concept that isn't overly similar to games already on the service, it gets approved. But since we receive more proposals from independent developers than our internal team can possibly handle, we need to filter submissions by additional criteria.

If a developer needs funding, working with a publisher is generally the right strategy. Developers who need substantial assistance with any part of game development (engineering, art) would also be better served by working with a publisher.

One of the key points of difference between developing XBLA and PSN games, according to Sony, has been the size of download. With 1GB limit for the game and up to four add-on 1GB packs, you can have a game of some 5GB in size on the PlayStation Store. XBLA's file size limit is 150MB. Why is that the case – and do you have any plans to change the file size?
First, we are committed to preserving an ecosystem in which developers can thrive and take risks on innovative games. Second, we want XBLA games to be pick-up-and-play experiences.

Anyone who thinks you need 5GB to make a good game hasn't played with a Nintendo DS recently. And anyone who thinks you can't make a beautiful game in under 150MB hasn't seen *RoboBlitz* or *Undertow* – both XBLA games that clock in around 50MB.

> ***"We're maintaining XBLA as a place where developers can compete without spending millions…***

Nintendo's WiiWare service is also claiming to let developers deliver smaller games, but offer more control on the release of the game – how concerned are you about this stealing away attention from Live Arcade?
The Wii is a great platform. However, XBLA has a big advantage vis-à-vis its association with Live; Nintendo is still working to flesh out the Wii's online service. Furthermore, neither Nintendo nor Sony have an answer to XNA Game Studio and the Creators Club. Microsoft has put tremendous effort into creating a platform that makes life easier for hobbyists and professional developers, and I expect that effort to pay off handsomely in the near future. In fact, if you've seen the results of the Dream Build Play contest, I think you'll agree that our bet on XNA is already starting to pay off.

Ultimately, we aren't seeing any reduction whatsoever in developer interest in XBLA, so we're pretty happy with the current state of things.

The service's release pattern is currently structured around having one or two titles appear on a Wednesday – will that change/increase any point soon?
Xbox Live Arcade Wednesdays has been very successful for us, so we will certainly continue to bring one or two titles online each week. In general, you won't see more than two titles a week anytime soon.

How far into the planning for 2008's portfolio are you?
We definitely have a bunch of great games coming down the pipe. But as I mentioned earlier, if you submit a game today, the odds are extremely good that by the time the game is finished there will be an opening on the schedule for it within weeks at most.

How are you balancing the portfolio of games when it comes to putting retro titles versus new ones on the service?
Many recently-released retro titles are selling very well - and we get more requests for retro all the time – so you can expect retro to remain a healthy percentage of the portfolio. That said, we absolutely want a good balance of content – retro and original, action and non-action, single player and multiplayer. XBLA is and will remain a service that offers something for everyone.

I also want to emphasize that in many ways, XBLA is the perfect environment in which to experiment with innovative gameplay and original IP. Obviously, the lower costs of development and distribution help, but in addition, it's worth noting that, as of today, every game we have ever launched has ultimately been downloaded by hundreds of thousands of people at minimum. With that kind of exposure, so many creative opportunities open up to developers.

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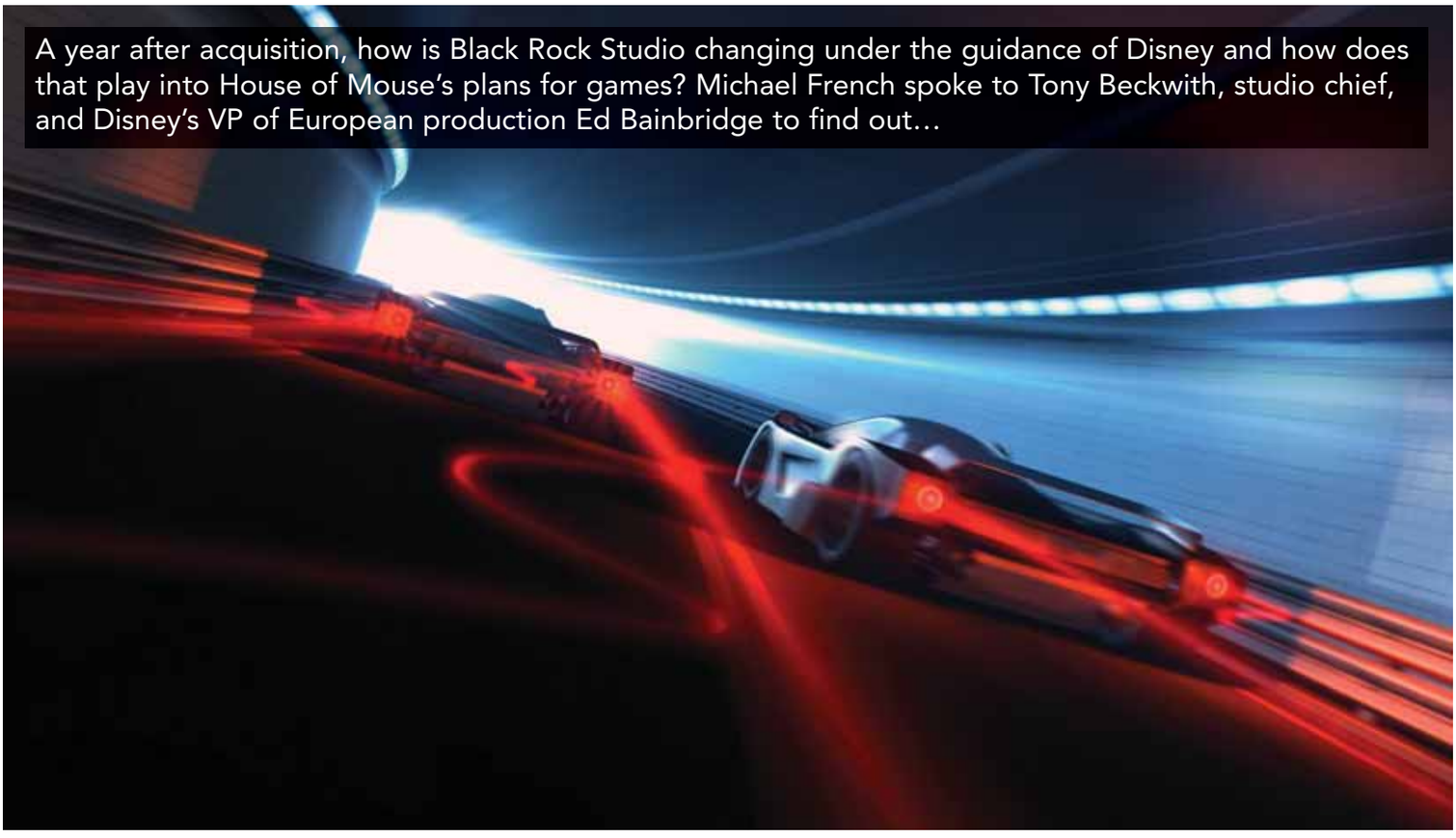
LIFE IN THE

A year after acquisition, how is Black Rock Studio changing under the guidance of Disney and how does that play into House of Mouse's plans for games? Michael French spoke to Tony Beckwith, studio chief, and Disney's VP of European production Ed Bainbridge to find out…



In the past 12 months, the biggest stories regarding the future of games developers have been sparked by the biggest companies.

Music giant MTV bought *Guitar Hero* creator Harmonix; sister firm Nickelodeon pledged to spend hundreds of millions on casual games; and Warner Bros wants to conquer the big league dominated by EA and co. via a talent-centric business plan.

Beating all of these to the punch, however, was Disney Interactive Studios' purchase of Climax's Brighton-based racing team, recently rebranded to Black Rock Studio.

It was a savvy move for Disney, which not only gained an in-house foothold in Europe, but also a highly-regarded studio with excellent in-house technology.

Meanwhile, studio manager Tony Beckwith and his team gained something that most other studios don't – the chance to give the team a new name, access to better financing, and to just get on with things without a publisher-dispatched producer or, worse, the independent studio's accountant, breathing down their neck.

"As an independent you have to make decisions that make money, but in the long-term can damage you. There's no pressure like that at Disney…"

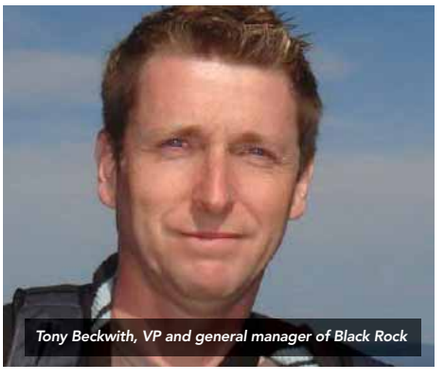
Tony Beckwith, General Manager, Black Rock Studio

"As an independent, these days with next-gen you live very hand-to-mouth," says Beckwith, singling out the biggest contrast between Black Rock's life today and how things were a year ago. "We all know that to compete at the table for next-gen, specifically PS3 and Xbox 360, you need the investment – but independents can't compete there. So it's good to be with people who have bigger pockets.

"Sometimes as an independent you have to make decisions that in the short-term make you money, but in the long term can damage you. There's no pressure like that here," he adds, saying that now the team can plan for future projects and technology, much better.

Disney's finances, and its willingness to spend them on games, have already been widely publicised. The company has said that within the next few years it will be spending $350m annually on games development to build its interactive entertainment business. Via a mix of transferring Disney properties to games and building new ones, the cash will help turn Disney into a bigger player in games. After three

FAST LANE


Tony Beckwith, VP and general manager of Black Rock

Disney's European production VP, Ed Bainbridge

years of building its self-publishing business via some key partnerships with UK studios such as Traveller's Tales (for *Lion, The Witch and The Wardrobe*) and Eurocom (*Pirates of the Caribbean* – Disney's first UK all formats number one earlier this year), buying Climax Racing was a clear bid to help the company take the next step – but specifically with its own people-focused approach.

Explains European production VP Ed Bainbridge: "What was key was the fact we weren't buying into IP – we bought into people, technology and talent. The creativity and innovation there was apparent. They really challenge the way games are made and have shown a spirit of innovation, even within a franchise."

So with the shackles of THQ's *MotoGP* cast off, the team at Black Rock is being charged with helping boost the drive behind new IP, devising wholly-new racing titles with the first due out for release next year.

It's a nice irony that, while now part of what Bainbridge calls "one of the biggest content companies in the world" (and given that Disney owns a raft of iconic cartoon characters, Pixar, US TV station ABC – responsible for the likes of *Lost* and *Desperate Housewives* – and entertainment brand Touchstone, it's hard not to disagree), Black Rock will be contributing to that roster rather than simply being a slave to it.

"We're really known for licenced stuff, where the publisher calls the shots. The great thing at Disney is that we won't be doing licences," says Beckwith. "When we first joined Disney a lot of my mates called me up saying 'Oh, you're gonna make 'Bambi Kart', then?' But we're not. This is an investment from Disney to create original IP in the video game space."

TECHNOLOGY RACE

So what else has Black Rock gained in joining the House of Mouse? According to Beckwith a number of new elements have been bolted onto production and general day-to-day studio practice that are making the team enjoy their work much more.

For a start, there's now just two main game teams at the studio – previously, under Climax, the studio would at times split into up to five or so teams to make sure all contracts were fulfilled.

Meanwhile, the Core Technology team has grown following Disney's investment to help drive the maintenance and development of the studio's in-house engine, Tomcat – a key piece of the puzzle for Beckwith and Bainbridge.

"We are completely behind having to develop our own engine, as we always have been," explains Beckwith. Although the studio uses some smaller middleware to complement its own work, the team's success with *MotoGP* had been driven by its technology – and Beckwith makes clear his views on why having a core solution built in-house is better than a third party one.

"Back when Renderware was around, you have to remember that it was very clear there were Renderware games and then Burnout," he says, adding: "If you use other people's technology it does hold you back."

And that's the last thing Disney wants given that Black Rock is being fast-tracked towards boosting the company's content slate. Historically, it is a team which has built its reputation with a technology-focused approach to games development – Beckwith says that is what gives the team a competitive edge.

So Disney has also introduced the team to some Hollywood-esque approaches to help improve production.

One of these has been the addition of a pre-visualisation department. Not entirely new, but this fast-prototyping and production of visual ideas – pretty key when consumers demand racing games today provide visual spectacle as well as visceral high-speed thrills – has meant

DISNEY'S WORLD

Black Rock's stable-mates…

PROPAGANDA GAMES
Acquired in 2005, Propaganda was Disney Interactive Studio's first internal team. Based in Vancouver and originally opened by a team of former EA Canada devs, with the studio currently working on the *Turok* franchise.

AVALANCHE SOFTWARE
Based in Salt Lake City, Avalanche was also acquired in 2005 after ten years as an independent. Since then it has worked on a number of adaptations of Disney properties such as *Chicken Little* and *Meet the Robinsons*.

FALL LINE STUDIOS
Dedicated to making games for the DS and Wii formats, also based in Salt Lake City and opened late in 2006. The studio is adapting both classic Disney properties for Nintendo machines and also devising new properties.

JUNCTION POINT
Junction Point is Disney's latest acquisition. Founded in 2005 by Warren Spector and Art Min and built around a number of former Ion Storm staff, the studio is based in Austin, Texas. Its first project for Disney is not yet announced.

Disney's empire also covers…

RECORDED ENTERTAINMENT
The company's movie and music brands reach far and wide, including the Buena Vista Motion Pictures Group (including Walt Disney Pictures, Touchstone Entertainment and Miramax), animation interests (Walt Disney Animation and Pixar), the Disney Music group and a Live Entertainment division (which devises the 'Disney on Ice' and similar productions)

TV & MEDIA NETWORKS
Disney is a major force in TV as well, having bought American network ABC in 1996. This includes its Disney TV channels, ABC itself and its relevant spin-offs, plus ESPN. The Walt Disney Internet company is also part of this, and has game interests as well, handling an upcoming *Pirates of the Caribeean* MMO.

IMAGINEERING
Responsible for the company's resorts and theme parks around the world.

CONSUMER PRODUCTS
Or as the rest of us call them, merchandisng, toys, bricks and mortar Disney stores, towels with Mickey Mouse on (or a Black Rock racing brand in future, perhaps?), and the like.

BRIGHTON'S ROCK

Key to the strategy behind the studio was its recent rebranding, ditching the name Climax Racing to become Black Rock Studio.

Taking its name from a Brighton landmark, the evolution of the name and logo – devised by the team itself – is a perfect example of how Disney and its studio are collaborating, says studio boss Tony Beckwith.

He explained: "It didn't come from Disney to be pressed down on us – one of the staff thought of it and we pushed it up. Plus it sets us apart from what people might expect of Disney. Black Rock has a bit of an edge to it."

"the bar has raised dramatically" when it comes to the team's output, says Beckwith.

Plus, the team is finding itself in close contact with some world famous Disney teams, contributing to and attending the company's internal technical conference and art councils. Some Black Rock staff recently attended an internal creative conference to mix with the people behind *Lost*, *Desperate Housewives*, and Pixar, sharing advice with fellow execs.

"It gives us access to things that not only we would never have had before, but which no one else would ever have had either," says Beckwith.

He adds: "The day we were acquired we got an email from someone at the Imagineering department [which builds the rides for Disney's theme park] explaining that he had lots of 3D assets used for the rides that we could use or look at if we wanted. That's just amazing."

Despite all this, however, Bainbridge says he's been careful to make sure that Beckwith and co. don't feel like they are being controlled or managed: "We work very closely, but when you buy technology and talent you have to maintain the spirit of the studio. We didn't want to meddle," he says.

SCHOOL OF ROCK

Instead, the two are keen to stress that Black Rock is instead informing the Disney business.

Although the 115-strong team seems like a minnow compared to the overall Disney staff roster of 130,000, it is charged with a big task in devising new ideas, ones which may even have the potential to go beyond games and into the other mediums that Disney is strong in. Think of how *Pirates of the Caribbean* made the transition from theme park stunt to box office smash, or how *High School Musical* went from made-for-TV movie to music industry money machine.

"Yes, we have a lot of well known brands, but we are a massive content company. We want to break new ideas in the games space – and if they can move over to other mediums then great. If an idea can translate across to other areas of our business – and in terms of the project Black Rock is currently working on, I think it can – then we're well positioned to make that happen immediately," says Bainbridge, although he's quick to add: "But the focus is on making games."

Adds Beckwith: "The key for us is to focus on the game because the results aren't strong if you come up with any old idea and then try and reverse engineer it." (But he can't help but admit it would be "the icing on the cake" if the Imagineering team called up to grab some assets from Black Rock to help build their next ride - racing games and their pure-thrill mechanic are clearly a perfect match for a theme park ride, after all.)

> ***"If an idea can translate to other areas of our business then we're well-positioned to make that happen immediately..."***
>
> ***Ed Bainbridge, European Production VP, Disney***

At the same time Black Rock plans to make sure its game production is focused by aligning its staff strategy with Disney's to place an emphasis on the people at the studio. Disney's culture, although corporate, is specifically structured around creative teams creating ways to entertain. With Disney's help, Black Rock is upping its graduate recruitment strategy, while also making sure that there's much personal interface between Black Rock and its owners.

Now the team is focusing on building its talent base in the long term. "Talent was always our mantra anyway," adds Beckwith, pointing out the the creative people the studio is looking to take on and already in place at Black Rock are supported because the location, in Brighton on the UK's South Coast, is conducive to that mindset. Back when it was Pixel Planet (which was even prior to its life as Climax Racing), the team was the first Brighton-based games development studio and laid the foundation for a vibrant industry scene in the city.

When it comes to finding those talented people as well, it's the company's grad and interns program, which of course helps get new blood into the studio on a yearly basis, other studios should take note of – as the studio is now a stepping stone for a big Disney career. The studio has been aided by fellow Disney stable-mate Pixar in building its own graduate strategy, and it's clear that from the excitement when the Black Rock team talk about this that they're finding future stars of the studio, if not the business itself.

THE BRIGHT STUFF

But amongst all these things, says Beckwith, is a staple point relevant not just to the relationship between Disney and Black Rock, or even all the new big media companies and the developers they are courting, but how developers should be embracing the chance to collaborate with their publishers, marketing people, anyone.

"When you're an independent developer the marketing people are a faceless entity," he says by way of example.

"Whereas here at Disney the relationship is much different – they visit us all the time. So we're really shaping the direction of the game all together, rather than making a 'product' and then just handing it over to some other team we never get to see. There's bucketloads more collaboration – and we all agree, together, on how the games we are working on will develop.

"And I think that will help the studio in turn, with the games we've got coming we can use all our talents and stake our claim and get noticed."

Adds Bainbridge: "Throughout Disney there is a strong drive to excel – and we as Disney Interactive Studios as a whole are part of that culture. Working with Tony and the studio is going to take Disney on a journey to place that it hasn't been before."

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STATE OF

Last year Tiga, UKTI and DTI (now called BERR) commissioned a wide-ranging report from Games Investor Consulting to look at the competitive nature of the games industry and how the UK's games development sector fits in. The report – unique in its scope and detail – has already grabbed headlines before publication, making for illuminating reading. Here, we exclusively present an abridged version ahead of its public distribution…

The Playing for Keeps report is a wide-ranging research project initiated by UKTI, DTI (now BERR) and Tiga, and conducted by Games Investor Consulting, which looks at the state of play for games development in the UK and how it compares to the rest of the world.

The aim was to build on Tiga's initial work and deliver detailed evidence-based research into the current and future states of the UK games industry with a focus on the creation of new games intellectual property, the ability of new companies to start up in the UK and the barriers to inward investment by overseas companies into the UK.

The report comprises a broad range of research areas including detailed comparative profiles of the USA, Canada, France, Australia, Singapore, Korea as well as the UK.

UKTI will be publishing part of the research alongside two seminars set to take place on October 24th: an invitation-only session on Games Production and Globalisation, chaired by UKTI minister Digby Jones, and a session on Creating and Exploiting Games IP with the Culture Minister Margaret Hodge.

The following is a highly abridged version of parts of the report, with data from early 2007.

Note: All $ figures given are in USD

Games Investor Consulting is a specialist games industry consultancy founded in 2003 to provide independent games research and corporate finance consulting to the games industry and financial community. Headed by Rick Gibson and Nick Gibson, GIC is one of the industry's most trusted sources for market intelligence, has generated a number of industry-standard reports and has consulted on games strategy and research for numerous games and media companies as well as trade and governmental bodies.

LESSONS LEARNT FROM KEY UK IPS

Profiles and analysis of ten leading UK-originated games IPs were conducted as part of the research, with the following conclusions…

Rollercoaster Tycoon
Created: 1999
Developer: Chris Sawyer

Driver
Created: 1999
Developer: Reflections

Grand Theft Auto
Created: 1997
Developer: DMA Design (until 2002); Rockstar North

Burnout
Created: 2001
Developer: EA Criterion

Tomb Raider
Created: 1996
Developer: Core Design (until 2004); Crystal Dynamics

Worms
Created: 1994
Developer: Team 17

Championship Manager
Created: 1992
Developer: Sports Interactive (until 2004); Beautiful Game Studios

Black & White
Created: 2001
Developer: Lionhead

Elite
Created: 1984
Developer: David Braben and Ian Bell

Runescape
Created: 2001
Developer: Jagex

- The best UK games are cultural artefacts which, like their peers in any UK media, wed strong characterisation, design, humour and creative flair with technical ability to succeed on the world stage.
- The ownership of successful IP is a critical driver for the financial performance and value of any games company while its failure can lead to acquisitions with low valuations.
- Many of key UK IPs have succeeded by mining niche games genres or by building and responding to a loyal audience base, with the result in 'long tail' sales.
- However, many UK games IPs (and their founding companies) were acquired by global companies for tiny sums compared to subsequent sales.
- Small teams in experienced UK companies have often created the most innovative and successful games.
- Development technology that speeds (or slows) development underpins the success (or failure) of many of the UK's best games IPs.

PLAY

For more information on the government seminars related to this research, please contact Martine Parry on: *martine@applygroup.com*
Parts of this research will be published during the London Games Festival at *www.uktradeinvest.gov.uk*.

UK GAMES DEVELOPMENT INDUSTRY: THE FACTS

Number of independent developers: 160 (45 per cent fall since 2000), of which 11 developers in the UK have over 100 permanent staff. Studio numbers are now stable. Additionally, there are over 90 outsourcing companies.

Number of publishers: 70, including only two indigenous publishers of international scale. Many global publishers site their European headquarters in the UK, and many retain large studios.

Development expenditure: $730m in 2006, but heavily influenced by the strength of Sterling.

New IP generation and ownership: The UK is a world class hub for experienced development talent. The number of original UK IPs (particularly from independents) on current generation platforms reaching the market is falling as development costs rise.

Non-government funding: Medium. Many games companies have limited access to external funding. Most funding available in the UK at present is trade capital from global publishers. The UK is second only to the US in number of indigenous companies acquired, but has few large-scale purchasers. The UK has seen numerous small rounds of private financing but many have failed to deliver value to their investors. Of 15 companies that listed between 1996 to 2006, seven went bust or left the games market, five were sold for low valuations, and only two remain listed, one of which has now entered disposal talks. The UK wins less global games capital than other territories, largely missing the recent bubble in online and mobile investment. Few private equity funds invest in games production, and there is little assistance for games start-ups.

National government assistance: Low. The UK government provides no games-specific tax support or investment incentives. This is in keeping with UK government policy of providing no sector specific support for any industry, although film and television remain exceptions, with film being governed by strict EU-approved cultural tests. If government changed its position to make an exception for games, any games-specific state aid over €100,000 per project would need to be negotiated with the EC (France is currently negotiating with the EC to introduce a culturally-excepted games tax credit). UKTI provides assistance for trade missions to and from the UK, and runs the Computer Games Strategy Group to coordinate work across departments. The games sector is the joint responsibility of BERR and DCMS and is being considered as part of their forthcoming Green Paper on the Creative Economy. Most government support is via generic business support measures, the most meaningful of which is R&D tax credits which (due to current definitions of what constitutes research and development expenditure) return 5% of total development expenditure on average, Other generic investment incentives and grant schemes have low or no impact on games companies.

"There are 160 independents in the UK. 11 have over 100 permanent staff. Studio numbers are now stable..."

Local-level assistance: Low-Medium. The majority of games-specific funding that has taken place in the UK comes from predominantly European-funded Regional Development Agencies or Regional Screen Agencies, but coverage is inconsistent with games companies' locations. Most schemes provide tiny amounts, but a few (EM Media, Screen Yorkshire, Wales' Creative IP Fund, Northern Ireland's Broadband Content Initiative, and Scotland's ITI) cover larger scale games or games technology development. Some regions offer networking and support schemes for their local games clusters.
Education: 46 universities offer 81 games-specific courses. So far, 4 courses have been accredited by Skillset, the national media training body, to formalise the quality of such courses.

Graduates: 1,200 students graduated from games-specific courses in 2006, which will rise to 1,400 in 2007 and 1,700 in 2008. On average, between 25 to 30 per cent of these graduates successfully find work in games companies. Between 2002 and 2006, applicants for valued mathematics and computer sciences degree courses fell by 23 per cent.

Number of industry jobs (development staff in publisher and independent studios only): 8,000 permanent staff plus 700 freelancers, with 3,850 in independent and 4,150 in publisher studios. The total number of development staff in the industry has been growing since 2004. Publisher studios' headcounts have grown the fastest during this period, both through acquisition of large studios but also through organic growth. Although some graduate programmes exist, the UK lags other territories in university-to-industry linkages. The exception is Abertay University's Dare to be Digital competition, in which games prototypes are created in collaboration with industry.

Recruitment climate: Many studios find it hard to recruit, and larger studios attract the lion's share of new talent. Little historic brain-drain impact was found, and the UK is a magnet for development talent in Europe. However, the threat to the UK talent pool of a brain drain to lower-cost, high subsidy territories such as Québéc is increasing.

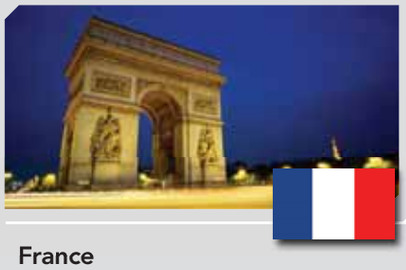
Dominant skill sets: Strong in technical and creative skill sets such as design, gameplay, programming, physics, artificial intelligence, outsourcing management and animation on most platforms but under-represented in skills in MMOGs and other online games and communities.

COMPETITOR MARKET ANALYSIS

	Australia	Canada
Snapshot profile	Small, concentrated, consolidating sector, dominated by global publishers.	Third most revenue-generative development market, dominated by global publishers, weak independent sector.
Market values 2006		
Software retail market	$596m	$584m
Proportion of western retail sales	1.3%	13.2%
Development expenditure	$55m	$420m
Development and publishing		
Number of independent developers	45	110
Mortality rate since 2000	25%	40%
Export value of games to economy (2005)	$77m	$1,750m
Number of publishers located in territory	15	20
Top 3 games companies' revenues	N/A	$67.5m
IP creation		
New IP generation and ownership	Low-medium	Good
Date of first game company founding	1980	1985
Funding		
Non-governmental funding	Low-medium	Medium-good
Games specific funds (federal)	Low-medium	Medium-good
Games specific funds (local)	Good	Good
Acquisitions (ranking by location of acquirer)	-	-
Values (ranking by acquirer expenditure)	-	-
Acquisitions (ranking by location of acquired)	-	5
Values (ranking amounts received by acquired)	-	5
Private financing (ranking by no. of funding rounds)	-	4
Private financing (ranking by values of funding rounds)	-	3
Labour market (2006)		
Number of insitutions offering games courses	15	48
Games graduates per annum	600	800
Graduates per university	40	17
Related graduates per annum	25,000	43,700
Number of development jobs	1,250	6,100
Flexibility of employment laws	Good	Good
University-industry linkages	Medium-good	Good
Junior artist salary	US$27,000	US$42,000
Lead artist salary	US$42,500	US$59,000
Junior programmer salary	US$35,000	US$54,000
Lead programmer salary	US$54,000	US$68,000
Conclusion	With little indigenous IP and some growth constraints, it's a niche player and likely to remain so.	With world-beating studios and generous state aid, this is a popular next location for major publishers.

Sources: GIC, ESA/NPD, IEAA / GfK, ESAC/NPDC, Chart-Track/GfK, Chart-Track/ELSPA, GDAA, UWO, Datascope, Interactive Selection, Mairie de Paris, Develop, Audience Insights/Game Developer

All low, medium and good scores are comparative to other territories



France
Strong publishers, but independent sector collapsed after 2000, highly unstable, state supported.

UK
Fourth most revenue-generative development market, experienced, high costs, growing but no global-scale publishers.

USA
Global market leader, balanced market of publishers and developers, strong IP, booming industry.

$1,435m	$2,650m	$7,400m
2.9%	12.4%	44.0%
$180m	$730m	$1,840m
85	160	650
45%	45%	25%
N/A	$881m	N/A
20	70	120
$2,010m	$507m	$5,370m
Low-medium	Good	Good
1983	1982	1971
Medium-good	Medium	Good
Good	Low	Low-medium
Good	Low-medium	Medium-good
4	3	1
3	4	1
3	2	1
-	3	1
3	2	1
4	2	1
7	45	200
250	1200	4,700
36	27	24
NA	26,000	85,000
1,750	8,300	25,000
Low	Medium-good	Good
Low-medium	Low-medium	Good
US$56,500	US$34,000	US$46,000
US$67,000	US$78,000	US$68,000
US$47,500	US$31,000	US$53,000
US$93,000	US$98,000	US$82,000
Despite generous state aid, its development industry is in crisis, and its publishers are thriving overseas.	Buoyant today but facing long term threats of poor access to finance and diminishing new original IP	The market-leader whose publishers dominate the industry, but it is responding slowly to globalisation.

Outlook for the UK

This report shows that while the UK is still one of the world's great games development markets, it faces some structural challenges in the medium term which threaten its ability to continue to produce strong original new IP, and change consumers' definition of games…

MATURITY

Although its leading studios still rank well on the world stage, the UK has without doubt lost ground to emerging markets in recent years. Games made in Canada's studios generated more revenues than the UK's in 2006, with Canadian games taking an estimated 13.2 per cent of western games retail revenues, compared to the UK's 12.4 per cent. In terms of development expenditure, the UK is much further ahead, due to dollar-sterling exchange rates, the higher cost of development resource and the larger number of development staff in many more development companies in UK studios. So, despite spending 75 per cent more on production, UK games grossed less than Canadian games world-wide in 2006. Canada's studio sales lead is not yet large, and the two territories will jockey for third position for several years yet. However, more fundamental issues threaten increased instability.

INNOVATION

The UK has historically generated strong IP, some of which (*SingStar*, *Goldeneye*, *RollerCoaster Tycoon*, *Elite* and *Grand Theft Auto*) have created or defined genres. The UK industry's strongest period of originating groundbreaking new IP came when game production budgets could be self-financed from a developer's own cash resources, when the break-even points for the developer were within reach and publishers were less aggressive about owning new IP. In general, these conditions no longer exist. Although still a premier location for innovative game development, much of the investment in successful new IP is being made by global publishers based partly in the UK, and the pace of original IP deriving from UK-owned companies appears to be slowing.

SLOWING PACE OF IP CREATION

This lack of ground-breaking new IP is not due to a deficit in creativity. It has more to do with structural and cyclical drivers around how games production is financed, such as dramatic hikes in console development costs driving up break-even points for publishers (even higher for developers), risk-aversion amongst publishers as they invest in titles and technology for new consoles, the inability of independent developers to access external finance, and commercial models delivering little if any royalty flow to independents. Few UK studios can afford to self-fund a new IP on a current generation console, which forces studios to target lower cost platforms with lower potential returns, to undertake shorter term work-for-hire projects to maintain their understanding of new console platforms and invest heavily and continuously in updating their games production technology. GIC identifies this as the IP poverty trap, one characterised by limited access to finance, either private or public.

"Despite global pressure, the UK games development market is not under imminent threat of collapse…"

ACCESS TO FINANCE

The private sector provides little succour to companies seeking funds for IP production. Finance companies got burned by games companies during the dotcom boom years and many remain sceptical about games and in particular traditional games development, which is perceived as high risk and low reward.

The current boom in online games and community investment has largely bypassed the UK due to an almost complete dearth of UK-based online games or community companies. Most of the available funding comes from trade sources, deriving from direct publisher to independent developer deals or subsequent to acquisitions of independent developers. The UK has been a primary target for acquisitions by global publishers looking for experience and IP. Such acquisitions are an entirely natural part of the ecosystem of the industry, inherently creating short-term value for UK entrepreneurs and often precipitating substantial injections of capital by the parent company to finance their new acquisition's expansion. Historically, IP creation has derived from both publisher and independent studios, but the balance is becoming skewed.

Increasingly, major games development territories such as Canada, France and, surprisingly, the US are characterised by federal or regional governmental support, in the form of tax breaks, IP funds and investment incentives tailored specifically to games companies' needs. Here the UK falls far behind its competitors, with low games-specific funding which cannot address the fundamental problem of poor access to finance. What support is available (such as R&D tax credits) is appreciated by the industry but, returning around 5 per cent of a games' development expenditure, has limited impact on development expenditure, especially compared to games tax breaks of 20 per cent to nearly 40 per cent in competitor territories. Regional European-funded activities by various games clusters and RDAs vary widely. Some provide IP funds but the availability and scale of such funds does not always correspond to the location or needs of games companies.

GROWTH POTENTIAL

After a fall between 2000 and 2004, development expenditure has been growing as have the numbers of staff in the industry. Numbers of independent developers have not recovered substantially, but the extinction event was Darwinian in outcome, leaving better-run, more financially stable and effective developers better able to service their publisher partners and theoretically better positioned to develop new IP. At this juncture in the current cycle, publisher studios are growing fast and the independent sector is buoyant. Recruitment needs are still undersupplied, in part due to concerns about the quality of games graduates, resulting in only 30 per cent of games graduates finding work. The fight for talent is fierce and leaves many small developers struggling to expand.

COMPETITIVE OUTLOOK

The landscape has changed over the last five years to an uneven and globalised playing field in which UK companies compete at a distinct disadvantage. With poor access to finance, the UK is the highest cost market for development in the west, and its games industry currently appears to have little prospect of games-specific tax or investment incentive support from central government. Government will be engaging with industry during two seminars on October 24th to discuss how the UK games industry can continue to effectively compete globally.

Despite global pressure and concerted campaigns to tempt UK studios to relocate to subsidised markets like Québéc, the UK games development market is not under imminent threat of collapse. It is currently buoyant and growing, driven by publishers growing their studio headcount substantially and seeking experienced, technically proficient 3rd party studios to satisfy the demand created by the apex of the current cycle expected over the next one to two years.

The UK will remain the largest and highest-skilled games talent pool in Europe, and its studios will continue to be targets for acquisition by global publishers keen to acquire ready-formed, innovative and technically expert teams. However, as development costs grow and development experience in lower cost markets rises to meet that of more mature markets, international companies will find it harder to justify locating or growing in the UK.

The medium term threat to UK development is stasis or possibly mild contraction in the face of strong competition from developing markets, Canada in particular. The longer-term threat is more serious, triggered by the IP poverty trap. Despite the advent of new distribution channels like casual games download services on consoles, poor access to finance, outdated commercial models and rising production costs are creating a bottleneck for new IP that will continue to struggle to get to market. This risks damaging the UK's one unique selling proposition which can counteract the cost argument – its creativity.

INDUSTRY SURVEY RESULTS

Early in 2007, 15 of the UK's most prominent independent developers, publisher studios and publisher head offices were interviewed about the UK as a market for games development. Here is what they said…

All respondents were aware of the Canadian incentives. 40% have set up or acquired studios in markets where such incentives are offered, half of those in Canada.

47% of respondents thought that Canada had already drained talent from the UK

Nearly 90% of independents will self-fund part of a new game's development, and **all independents view owning technology IP as critical** for increasing production efficiency and winning licence work contracts

There was strong agreement that **independents struggle to get new original IP distributed**. Many think new platforms open opportunities for new original IP, but a **sizeable number of respondents think new UK IP is shrinking**. Most think this situation will persist for the next five years

All respondents agreed that **publishers will not distribute new original IP without controlling or owning its rights**, and most agreed that publishers invest less time, effort and money in new independent IP

60%

of respondents are using, or are planning to find, project financing for new IP

75%

of independent studio respondents plan to go direct to consumer via Xbox Live Arcade (or similar channels)

The **best commercial models** according to those surveyed are variable rate royalties, royalties at publisher break even or partial self-funding because they deliver the fastest recoupment

R&D tax credits were the most frequently accessed source of external finance (after publisher funding for games development)

Opinions were split about how difficult it was to recruit in the UK, **but nearly half of respondents have links to universities**

Royalties are rare for independent studio respondents. Only 12% of their revenues derive from royalty overages. Most revenues come from advances for licence work deals

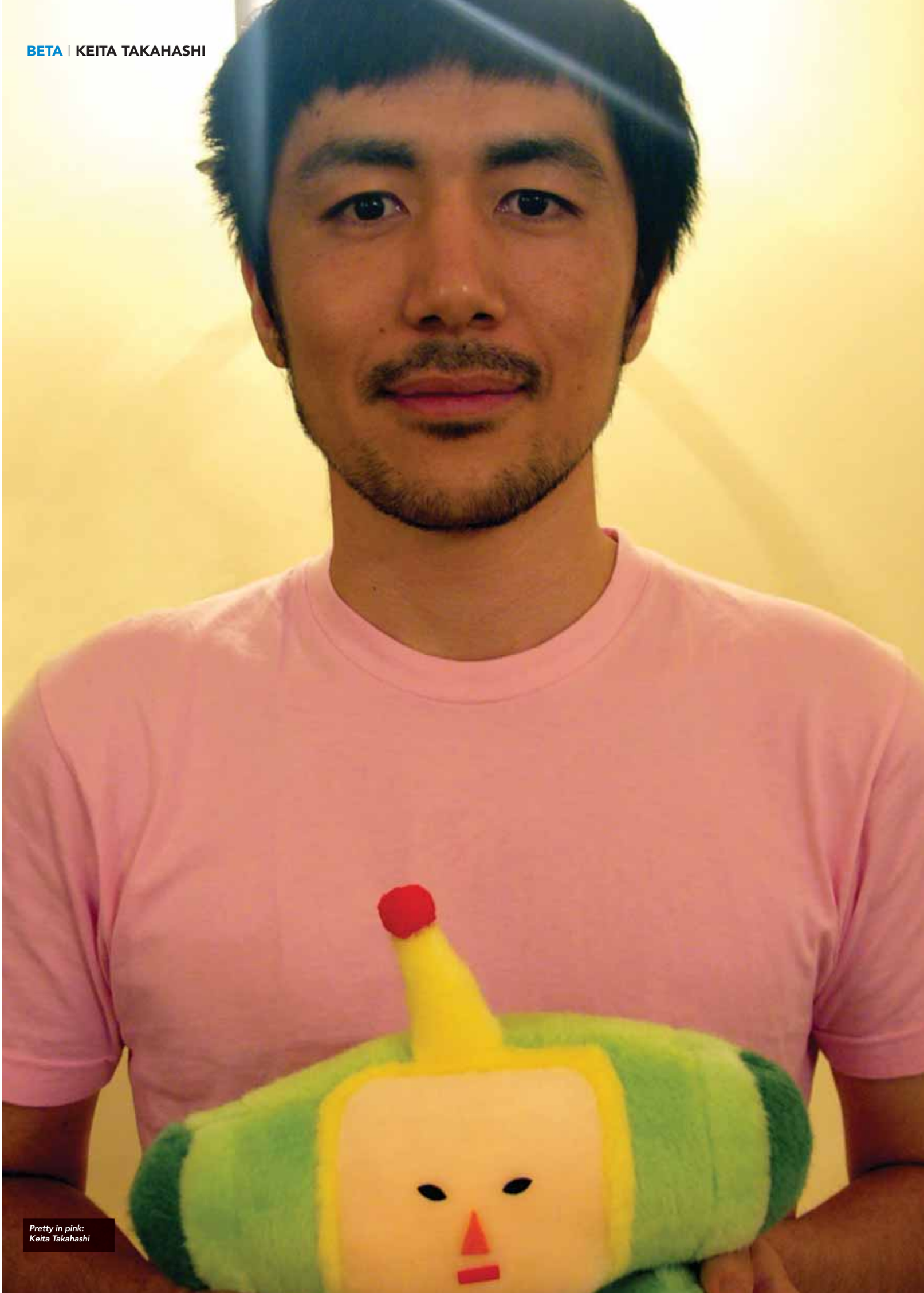
87%

of respondents think that the UK government should introduce tax breaks for games production similar to those available for film production to counter the threat of subsidies from competitor markets. Prototype funding was another popular measure suggested by respondents

Nearly three quarters of respondents thought that **incentives offered overseas destroyed the level playing field**, and made the UK less competitive. 40% thought UK companies would slow or stop their growth in the UK, with a knock on impact on creating new original IP

40%

of respondents thought that digital distribution of games would transform the industry



Pretty in pink: Keita Takahashi

Inside the mind of Keita Takahashi

In this extract from his book Inside Game Design, Iain Simons talks to Katamari Damacy creator Keita Takahashi about his work ethic, how he comes up with ideas, and his thoughts on the video games medium…

It seemed as if he came out of nowhere. Suddenly in 2004, everyone who cared about games was talking about an obscure PS2 title that wasn't even available in Europe. The word-of-mouth on Keita Takahashi's breakthrough title, *Katamari Damacy*, was extraordinary. Without volunteering, he had become a poster child for innovation, playfulness and unadulterated freedom in game design.

Takahashi became widely fêted, receiving ovations simply for turning up at developer conferences around the world. Curiously, the man himself has always seemed genuinely confused (possibly a little bemused?) by the global attention.

I'm interested to know how game ideas emerge for you. For example, are they visual? Are they control-based?
I see concepts being a true reflection of what you want to make, which takes into account the trends that can be found at the time. Ideas are random thoughts that suddenly pop up, and so I definitely feel concepts are more important.

Such information is usually filtered through my brain, which usually results in an end product that can only be decoded and understood by myself. Because of that, it was a surprise to see that the world of *Katamari* was accepted well and understood by everyone at the time.

I'd say my ideas are visual. An image becomes visible in my head when something crops up, although it is rather faint at first. It is difficult to explain how such an idea materializes, since we are talking about visual ideas becoming a proper shape or piece.

Due to the difficulty of explaining the visuals in my head, I prefer to work in small groups when developing an idea. Passing on information by writing is useful when it comes to communicating facts objectively, but it is not ideal when trying to pass on concepts and detail to someone else.

Therefore, I usually minimize the number of documents I create and prefer to talk to anyone in charge using visual illustrations when required to get any ideas moving. This is an old-fashioned, non-productive method that gives a headache to the management, I suppose.

"Don't try to become like me! What's the point of having similar games created by similar-thinking people?"

How do you evaluate these ideas?
That is rather difficult to answer. A sort of criteria definitely exists within me, but I cannot figure out how exactly to put it into context.

What usually happens is the following. When I come up with an idea that feels interesting, I usually share the idea with someone and talk it over. But I have to admit, I normally choose who I speak to first and that person is usually someone I know who will understand my philosophy.

Talking to someone who can give you feedback definitely helps to start with. It was quite easy with *Katamari*, but what I'm doing at the moment is not so easy. The project has been going on for a while, but I still don't feel my idea and concept has been fully understood by everyone just yet. I'm sure I'll get there in the end, though.

Do you think it's helpful when the hardware itself becomes a clear influence on the design? I remember you didn't feel that about the Wii at first – have your thoughts changed?
I have to admit that I don't play videogames too much. On a personal note, anything that is abnormal in terms of its design interests me.

For example, whenever I see a picture that is original in its own right, I tend to see my limitation for expressing my ideas and feel encouraged to become more flexible.

I think the Wii is good fun. The console entrance has been left wide open for everyone and I can see it being accepted by a wide audience in a short period of time. However, I think working for the industry has decreased the fun for me slightly because of its originality.

However, on a very personal point of view as a developer, highlighting too much of the 'use your body to play the game' approach can to some degree look like denying video gaming's past as a whole. I just can't help feeling that everything is not right somehow.

Using your body is good exercise and being able to play tennis and bowling virtually in such an accessible way is something Nintendo should be proud of. However, I'm not sure if moving your body according to the gameplay is the same as having your body moved by a certain gimmick within, let's say, an action game when something comes out of the blue on the screen.

I feel that gaming experience is made up from the imaginary and creative brain a player holds as well. What's fun is fun, but getting that extra tension and fun feel from a game is down to the creative side and the game. Maybe I'm being too conservative but with the number of titles on the decrease in terms of originality and creativity, I do feel the danger of moving into the easy approach Wii has provided us with.

Please don't get me wrong; the Wii itself is definitely fun as a console, but I'm not totally convinced with the console at this stage.

Developers around the world clearly see your work as inspirational because you represent a kind of creative freedom that few experience. What's the best advice you can give creative people?
The simple advice from me is, don't try to become like me! What's the point of having similar games created by similar-

Right: Katamari Damacy, in all its splendour. Up: Teasing images from Takahashi's new concept Nobi Nobi Boy

thinking people? We don't want to see the same – or nearly the same – titles lining up on the shelves do we? But my advice is, don't be afraid to express your ideas and be yourself! Let's face it, surely there can't be too many people who want to become like me anyway!

How do you (physically) arrange your work studio to be as good as it can be for you? What things are important?
I don't have too much of a preference, but I just can't stand partitions. Some people say that productivity increases as people can concentrate more, but I don't see that. You already have a PC monitor in front of you, which pretty much keeps you tied up during the day while at your desk. Having a partition around it simply reduces the opportunity to have a quick conversation with other people in the office.

Maybe the partition layout is useful for routine work where one knows the exact requirements, but it is definitely not for me. Communication is important, not just for myself but for my colleagues as well. Open layout is definitely the keyword for me.

Is there a particular place or time when you find you're able to be more creative?
Not really. New ideas tend to pop up while I'm having a walk or while travelling on the train, and so on. I definitely cannot come up with anything when I'm stuck in one place thinking about one thing only.

When I need to come up with something, I'll just say to myself, let's start thinking, and out of the blue something will drop into my head if it's a good day.

Then by talking to someone about the initial idea, the idea starts to become more real and gradually takes shape.

"New ideas tend to pop up while I'm having a walk or travelling on the train, and so on. I definitely can't come up with anything when I'm stuck in one place thinking about one thing only…"

Can you take me through a typical day in the life of the development of a project?
I usually arrive in the office around 10 in the morning and check my emails to start with. Then I'll browse the Internet for news on macs and other electronic gadgets before starting to work properly at around 10.30.

After replying to emails and talking over new ideas with the team, it's quite normal for the workday to end at about 11 in the evening. Then I'll start finishing off and will start to make my way home and usually go to bed at two in the morning.

I know that you've expressed a will to work in other forms – you think that working in other mediums would benefit all game designers?
Yes, I definitely think that's important. Some people say that it will add extra value to the games you create by knowing the outside world but for me, it's more simple.

My philosophy is to do whatever you want to do when you want to. What's the point in limiting yourself to what you're working on when you never know how you will feel about your job when you wake up the next morning?

I don't see why people who have never touched the world of video games couldn't try to make one and open up the possibility of the industry as a whole.

On a personal note, it will be ideal for me if I can keep on creating new games as well as designing T-shirts and playgrounds, for example. I'm sure this will open up the possibilities for making the whole industry more active and creative by blending their cultures and ways of thinking.

GAMECITY

Keita Takahashi will be presenting the Vision Statement at GameCity on October 27th
www.gamecity.org

This interview is an extract from Inside Game Design, by Iain Simons, published by Lawrence King. Along with the full interview with Keita Takahashi, the book includes interviews with the likes of Media Molecule, Relentless, Frontier, Lorne Lanning and Introversion. The book is priced £19.95 and is released this month, ISBN 978 1856695329.

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*All models shown are rendered by our in-game engine

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Grand designs

ITI Techmedia's Paul Sheppard says that developers need to improve their game design process at pre-production stage and offers a up a more methodological approach…

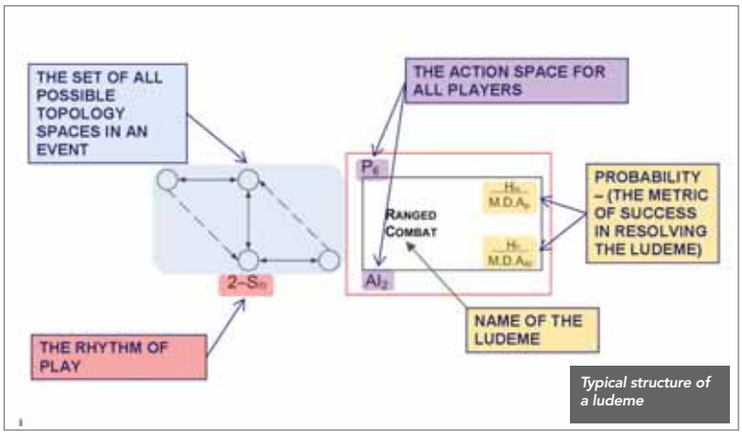
As we all know, the business of developing games has changed radically over the last 20 years. But growth means designers and developers need to embrace corporate cultures and management techniques – yet our industry is still in its infancy in terms of its approach to design.

In an industry that aims to combine technology with creativity, the lack of a structured approach to game design is a serious failing. Fundamentally, many games fail because of the developer's inability to capture, analyse and test the design of a new game before investing money in development. And often, the final product bears no resemblance to the game designer's original concept as it gets lost in the iterative development process.

In more established industries such as electronics, it would be unthinkable to consider building a product without first ensuring there is a clear design which can be properly tested using appropriate simulation technology. Similarly, in an architectural context no one would build a house without a full set of drawings. In either case, only once the design has been fully verified, and a detailed bill of materials with full costing produced, will the end product go into production.

In recognition of the obvious advantages to be gained from following such a process, over the last few years the industry has been searching for ways to plug this gap and give game developers the tools they need to improve their development process. A fair amount of theory has been put forward but at the *Develop* conference in July it was revealed that this theory may very soon become a commercial reality.

The secret lies in being able to 'write' games in notational format. The theory involves identifying the significant spaces in a game within which the player can move. These spaces become nodes within an abstract topology. Within any significant space, there will be significant events which are also assigned nodes and their hierarchical relationship to the significant spaces is recorded in a notational format. That said, the creation of this topology on its own doesn't allow game designers to analyse or simulate anything.


THE SET OF ALL POSSIBLE TOPOLOGY SPACES IN AN EVENT
THE ACTION SPACE FOR ALL PLAYERS
PROBABILITY – (THE METRIC OF SUCCESS IN RESOLVING THE LUDEME)
RANGED COMBAT
NAME OF THE LUDEME
THE RHYTHM OF PLAY
Typical structure of a ludeme

> ***"This approach should allow developers to stay true to the designer's original intent – something which often gets lost…"***

To do this, further notational elements have to be added to determine the ways in which an individual event is resolved. The approach under development devolves each individual event down to a ludeme structure. For our purposes, a ludeme is defined as 'the smallest possible unit of game play which has actual significance to the game experience.' A typical ludeme structure is shown in the diagram above.

The equations in the illustrated ludeme structure attaches a probability for success to each significant event. Once each of these significant events is arranged into a sequence that represents game play, the ludeme equations will provide a notational view of the game sequence. This includes the chances of the player proceeding through the set of events and hence through the set of spaces to reach a successful outcome.

Applying this notational approach allows game developers to undertake an analysis of game play that will provide invaluable guidance on what makes the game 'tick'. For example, developers will be able to graph the difficulty of each level with respect to the player against the significant events of the level. The graph will pinpoint where the game is easiest and where it is at its most difficult. It will even indicate areas of the game that may be too difficult.

Clearly, adopting this approach would be far too onerous to undertake manually. The key to commercial adoption of such an approach to game design lies in finding a way to pull all of this together into a simple tool that you don't have to be a mathematician to use. A recent research and development programme with a budget of over £5m, is doing just that. A simple notation editor and simulator that runs within Microsoft Visio is currently under development. The theoretical basis for this design tool has been tested on a range of existing games from simple board games to first person shooters and the results have been extremely positive. And if it's possible to deconstruct an existing game, it has the power to radically influence the development of new games.

For those at the coal face of design, attempts to attach such a mathematical approach to a creative process will seem like an anathema. But far from stifling the game designer's creativity this approach should allow developers to stay true to the designer's original intent – something which often gets lost in the iterative development process. And if the designer knows whether his game concept and structure makes sense before assets are created and levels built, then he can be sure his finance people will be happy too.

The notation editor and simulator will be available for commercial testing soon. If it works, it could revolutionise the game development process and save studios significant amounts of cash.

www.ititechmedia.com

Paul Sheppard *is R&D programme manager for the Online Games R&D Programme at ITI Techmedia, working on a range of new technologies that will address some of the key issues in game design and development*

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BUILD

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AUDIO: The Sega Rally sound team profiled, p55

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Latest Movements

SPECIAL FEATURE: Motion Capture, p57

Making a good exit

START A BUSINESS AND the first question you'll probably be asked is, 'What's your exit strategy?' In a sense, it's a ridiculous thing to say. The lifecycle of a company is totally prescribed: it will either go bust, be bought by another company, float on a stock exchange or, rarely, find longterm stability as a mutually-owned trust of some sort. In this context, the only thing that's significant is the price at which a company is eventually sold.

But generally that's the meaning of the exit strategy question: if you were to sell out, what would the price be?

This is a more interesting question as any half decent company will receive offers from time to time, so it's something the management needs to consider. And let's face it, almost everyone has a price. Of course, the more equity you've swapped for external investment along the way, the less room for manoeuvre is available. The VCs are hardwired to multiples of their investment. For them, when the price is right (and cash), the dotted line is signed.

Which, in a way, is what seemed to happen with Havok. Longterm and large shareholders Trinity Venture Capital and Bank of Scotland (Ireland) reported that the £55.1 million ($112 million) cash deal with Intel gained them a 100 per cent return, compared to their own May 2007 valuation of the stake.

Overall, then, it seems like a good deal for Havok's various owners. It's thought the company raised around $20 million in investment over its lifespan. To that extent, no matter what it ends up doing under Intel umbrella, it should be seen as one of the few success stories when it comes to games middleware.

Jon Jordan
jon.jordan@intentmedia.co.uk

‹ ART ›

SILO RELEASE PROMISES YEARS OF PLENTY

There's another 3D sculpting and modelling tool in town

3D SCULPTING AND MODELLING tools have provided the cutting edge for artists over recent years; something that's been underlined both by Autodesk's acquisition of SkyMatter and its Mudbox package and the continuing maturing of Luxology's Modo software.

Nevercenter's contribution to the sector comes, finally, in the shape of Silo version 2. The low-cost 3D modelling application has undergone a complete rewrite over the past two years, which the company claims has resulted in a package that's able to handle everything from creating organically sculpted high-polygon models to precisely-controlled hard-edged surfaces.

One key feature enabling this is the integration of traditional polygon modelling tools with more flexible brushes. In order to improve workflow, Silo only offers a small number of core polygon tools, which can be modified depending on the situation using sticky keys or context-sensitivity. Meanwhile, the brush-based tools enable you to add fine details to your mesh, as well as working on the base mesh. Silo also preserves displacement data, which isn't directly affected by changes to the overall topology. You can, of course, generate normal maps from arbitrary high and low resolution model pairs too.

UV wrapping is another regular art task that's received thought. Silo's unwrapping tool is based on the Least-Squares Conformal Mapping algorithm, and enables you to define your own seams, as well as use real-time vertex pinning and relaxing. Standard modelling tools such as Break, Merge and the displacement brushes can be used to edit the UVs.

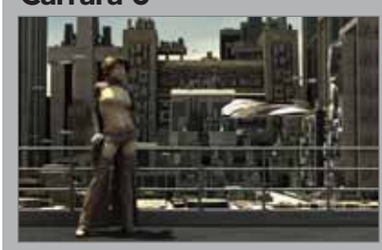
Silo 2

Price: $159, upgrade $59
Company: Nevercenter
Contact: support@nevercenter.com

Workflow to and from other packages is supported via the Topology Tool and the Surface Snapping system. These allow you to work over existing models, whether imported from another modelling packages or other assets such as scan data. The Surface Snapping enables many of Silo's tools to snap directly to the underlying model, while the Topology Tool enables you to sketch topology onto the model and then generate geometry from that sketch.

Finally, Silo's scene management system works in a similar way to traditional grouped layers so you can switch objects or groups of objects in and out of layers to improve the visibility of whatever you're working on. Silo version 2 is available in a single binary that supports both Mac OS X and Windows. A single licence enables you to have Silo installed on three machines.
www.nevercenter.com

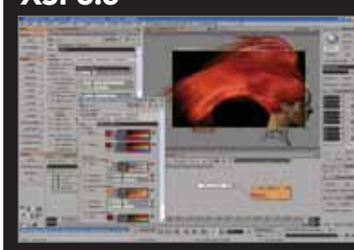
Carrara 6



Price: from $141, upgrades from $70
Company: DAZ 3D
Contact: +01 1801 495 1777
www.daz3d.com

DAZ 3D's package Carrara hits version 6 with support for the company's other content such as the Victoria, Michael and Aiko character templates one key feature. New modelling additions include non-linear animation, Euler rotation angles and dynamic hair. Brush tools are also added so you can carry out displacement modelling, while the symmetrical modelling option means you can mirror work on one side of the character to the other. As well as character modelling, Carrara includes rigging, animation and terrain-building functionality, with in-scattering of light and transparency with absorption being added to the rendering options.

XSI 6.5



Price: Essentials $2,995, Advanced $4,995
Company: Softimage
Contact: +44 1404 831715
www.softimage.com

Announced at Siggraph, Softimage is now shipping versions of its XSI 6.5 3D animation package. Hair and Fur modules (previously only available in Advanced) and Syflex Cloth (an addition which cost an extra $2,200) have been added to the entry-level Essentials release, while five batch rendering licenses are added to Advanced to ensure both packages offer value for money. In terms of general features, support for high dynamic range rendermaps is added, while UV editing and audio tools are improved and your ability to customise how XSI works is enhanced thanks to new APIs which have been added to the SDK.

< CODING >

INTEL CONTINUES TO GET SMALLER, FASTER

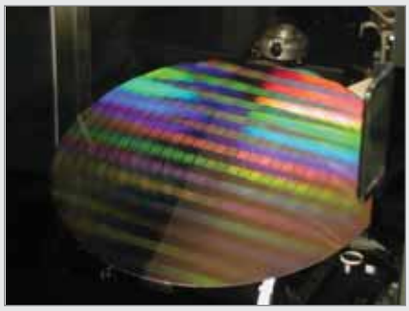
First 45nm chips are due this year, with 32nm chips coming in 2009

THE POINT AT WHICH Moore's Law stops becoming a self-fulfilling prophecy and starts to highlight scientific limits has always been a divisive issue. You could view it as the ultimate glass half-full versus half-empty dilemma for the semi-conductor industry. Still, such arguments remained muted at the Intel Developer Forum, as President and CEO Paul Otellini revealed the industry's first working 32 nanometer chips.

That technology won't begin production until 2009, but Intel's 45nm family of 15 processors, codenamed Penryn, will be start to become available in November. These dual and quad-core processors will initially be available in notebooks. Supporting DDR3 SDRAM, they will also use Intel's new SSE4 instruction set.

The company's next-generation 45nm chip architecture, codenamed Nehalem, which will account for a further 20 processors ranging from single to eight-way core, is due out in mid-2008. Its scalability marks a significant change in architecture for Intel, and will be the first Intel processor to use the QuickPath Interconnect system architecture which includes integrated memory controller technology.

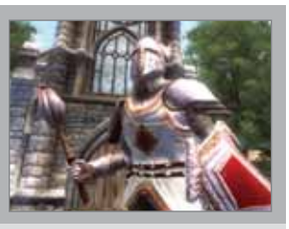
Various



Price: not applicable
Company: Intel
Contact: +44 1793 403000

Otellini also promised Intel's Tick-Tock strategy of alternating next generation silicon technology and a new microprocessor architecture would continue to accelerating the pace of innovation. Maybe Moore's Law is safe for another couple of years then.
www.intel.com

Gamebryo Wii



Price: Available on request
Company: Emergent
Contact: +01 818 222 5355
www.emergentgametech.com

With Emergent announcing best-of-breed hook-ups for its online hosting platform, notably using HP's Flexible Computing Services to provide a scalable, pay-as-you-go infrastructure, that doesn't mean work on its Gamebryo engine has scaled down. The latest announcement is the latest version has been ported to Wii to provide complete cross-platform options. Next up for the company will the version 2.4, due in early 2008. Alongside a focus on tools such as a fully feature terrain editor, it will include the company's Floodgate data streaming API, which is designed to improvement performance across the PlayStation 3's SPU processors.

HeroEngine

Price: Available on request
Company: Simutronics
Contact: +01 301 641 8510
www.heroengine.com

Simutronics' MMOG platform has received two new integrations, with StreamBase Systems and SL Corporation signed up as strategic technology partners. StreamBase's Complex Event Processing platform provides users with the ability to query, analyse and correlate real-time data on live systems, making it easier to react to bugs and exploits, as well as improving the efficiency of the development process. Similarly, SL Corporation's Enterprise RTView is a visualisation platform that lets you create easy-to-understand dashboards to view, analyse and aggregate real-time information.The technologies from both firms have been integrated as optional additions to HeroEngine.

< AUDIO >

FMOD MARCHES TO A NEW BEAT

New versions will now be released every month

THERE'S A NEW REGIME at Australian audio middleware outfit Firelight, which is working to schedule that will see major updates released on a monthly basis (on the 1st of the each month). These will be split into alternating bi-monthly releases of stable and experimental branches, so you can either get the most stable, or the more advanced build of the FMOD Ex engine depending on your specific requirements.

Meanwhile the current release of FMOD Ex moves onto 4.08. This includes FMOD Designer v1.09. Described as a solid and optimised build, it improves hardware support including an overall refresh for Mac CoreAudio, added native support for Vista's Windows audio session API (WASAPI) for lower latency, and the ability to improve usage of PlayStation 3 CPU RAM by storing sounds in the RSX graphic card's memory.

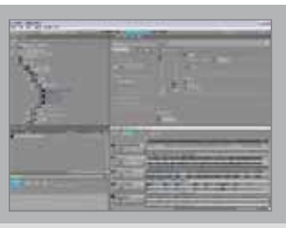
Other features include the addition of 3D Virtual reverbs, which can be automatically morphed and faded according to proximity, and better 3D performance using headphones, thanks to the addition of Head-Related Transfer Functions for software-mixed voices. FMOD's encoder can also now create MP2 and MP3 loops, and support is added for 16 channel MP3 tracks, making it easier to create interactive music.

Finally work carried out on FMOD Designer sees better interface options, a new Event Player application has been added so you can preview compiled projects, while support is added for Steinberg's Audio Stream Input/Output protocol.
www.fmod.org

FMOD Ex 4.08, Designer 1.09

Price: from $3,000
Company: Firelight Technologies
Contact: sales@fmod.org

Wwise 2007.2



Price: from $5,000
Company: Audiokinetic
Contact: +01 514 499 9100
www.audiokinetic.com

There's been plenty of financial activity at audio middleware company Audiokinetic, which has raised $5.2 million in its second round of financing. This, in turn, has fed into a more accessible evaluation process, and new pricing and licensing plans. These include a free non-commercial option, a $10,000 initial platform deal for Unreal Engine 3 licensees, and a main $15,000 price for a first console project plus $7,500 for additional SKUs.

Digital downloadable games are covered separately with a $0.10 per payable download royalty, or an initial $5,000 fee plus $2,500 for additional platforms.

3D Voice Platform

Price: Available on request
Company: DiamondWare
Contact: +01 480 380 1122
www.dw.com

Real-time 3D voice-over-IP technology provider DiamondWare unveiled the new version of its 3D Voice Platform at Austin Game Developer Conference. Designed to provide in-game audio for massively multiplayer games, the company claims it can provide mixed 3D high definition audio to 10,000 users in a single channel thanks to its clustering technology. New deployment and management tools such as a console screen to manage clusters, failover to enable hot-swapping of extra resources when an active machine fails and an authentication scheme that eliminates the need for a user accounts database are also included.

NETWORKINGROUNDUP

Let's get con

Most games offer some sort of online features but, surprisingly, there's less traditional networking middleware available than ever before, discovers Jon Jordan…

Actívision's decision to buy Irish networking provider Demonware in early 2007 all but marked the end of networking as a significant middleware market.

Sure, longterm players such as independent Quazal and GameSpy (already part of Fox Interactive Media) continue to innovate, but like many tool market sectors, the reduction in competition through acquisition highlights the fact that the smart money has moved elsewhere. In this case, partly it's due to the inclusion of networking within complete game engines such as Unreal 3, or dedicated MMOG engines such as BigWorld.

The fact developers can get also their hands on such technology direct from console vendors – Nintendo relies on GameSpy for both Wii and DS online functionality anyhow – doesn't help matters.

The rub however, is the potential loss of enabling cross-platform features. These haven't been particularly successful in the past though: anyone remember Dreamcast versus PC Quake?

And without strong commercial reasons for so doing, few publishers have pushed such hook ups.

But the rise of multiplayer mobile and portable games could change this in future, with Exit Games already supporting consoles via its Neutron engine, while Nokia's SNAP technology will power the various bits of hardware that run its next-gen N-Gage offering.

QUAZAL

TECHNOLOGY
Net-Z, Rendez-Vous, Spark!

CLIENTS
Crave, Eidos, Gas Powered Games, Midway, THQ, Crave, Ubisoft

HOST PLATFORMS
PC (Linux/Windows), PlayStation 3, PSP, Xbox 360

INTEGRATION WITH...
Unreal Engine 3

PRICE
Available on request

CONTACT
+01 514 395 4646

Supreme Commander uses Quazal

www.quazal.com

Recent updates to Quazal's family of products sees a conventional client-server topology added to its previously peer-to-peer Net-Z technology, while the company's lobby and matchmaking solution, Rendez-Vous, brings new opportunities for publishers with support for Xbox 360 via Microsoft's Layered Service Provider. Finally, the lobby-in-a-box Spark! now enables cross-platform deployment for Xbox 360 and PlayStation 3.

GAMESPY

TECHNOLOGY
GameSpy Suite

CLIENTS
Crytek, EA, Eidos, Firaxis, Nintendo, Sega, Square Enix, Ubisoft

HOST PLATFORMS
DS, PC (Mac/Linux/Windows), PlayStation 3, PSP, Wii, Xbox 360

INTEGRATION WITH...
Unreal Engine 3

PRICE
Available on request

CONTACT
+01 415 508 2000

PC game Crysis is using GameSpy

www.poweredbygamespy.com

Increasingly leveraging its position within the consumer-focused IGN Entertainment group, GameSpy offers various technologies ranging from in-game middleware to community-based marketing and stats systems. Examples include: the Comrade middleware that enables in-game and out-of-game community features; secure online profile storage Sake; advanced statistical system Atlas; guild management and communication tool Teams; and virtual in-game broadcast service Box.

RAKKRSOFT

TECHNOLOGY
RakNet v3.0

CLIENTS
Gabitasoft, N-Fusion, The Collective

HOST PLATFORMS
PC (Linux/Windows), PlayStation 3, Xbox 360

INTEGRATION WITH...
Reality Engine

PRICE
Free non-commercial license, or unlimited from $5,000

CONTACT
rakkar@rakkarsoft.com

One game to use RakNet is Monster Madness

www.rakkarsoft.com

A cross-platform C++, UDP-based network library, RakNet is designed to allow programmers to add response time-critical network capabilities to games. RakNet's object and memory replication system provides a framework which enables you to synchronise your program state. The open source project is supported with Doxygen and HTML manuals, as well as video tutorials, and licensing is only required on commercial releases.

nected

NOKIA

TECHNOLOGY
SNAP

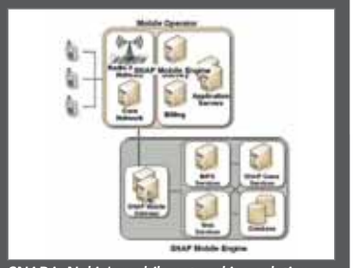
CLIENTS
D3Publisher, G-mode, Nokia, SINA, SingTel

HOST PLATFORMS
Java (MIDP 2.0/CLDC 1.0)

INTEGRATION WITH...
not applicable

COST
Free prior to deployment

CONTACT
fn.snapmobile@nokia.com



SNAP is Nokia's mobile networking solution

www.snapmobile.nokia.com

Originally developed as Sega's cross-platform networking platform for PC, Dreamcast and arcade gaming, SNAP has since morphed into Nokia's backbone solution for multiplayer mobile gaming. It's available via Sun's Java Wireless Toolkit, which includes the SNAP Mobile API and a SNAP Mobile sample application consisting of common uses of the API. SNAP includes features such as cross-operator matchmaking, community features and access to the web services.

EXIT GAMES

TECHNOLOGY
Neutron 4.0

CLIENTS
Ifone, Siemens, SkyZone, Fishlabs, Square Enix, Vivendi

HOST PLATFORMS
BREW, Flash (PC, PlayStation 3, Wii), Java, Windows Mobile

INTEGRATION WITH...
Not applicable

COST
Available on request

CONTACT
+49 40 41 35 960

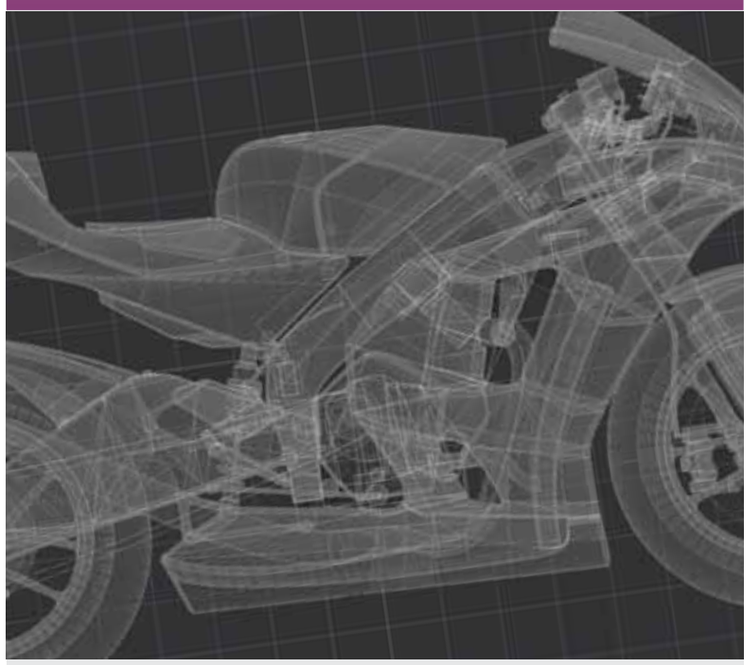
Mobile game Final Siege is using Neutron

www.exitgames.com

Based on the OMA Game Services standard, Exit Games' multiplayer game service Neutron supports a variety of mobile, handheld and console platforms, the latter via the new Flash library. Neutron offers features such as high scores, ghosting, matchmaking, persistent buddy-lists and in- and out-of-game communications. The managed service also handles the deployment and hosting of mobile games, providing an integrated build, test and run environment.

Pre-Production

by David Jefferies
Black Rock Studio



IN THE GOOD OLD DAYS the beauty of being a games programmer was that you never had to plan your work. We dived straight in and started hacking away at our masterpiece unlike those poor souls working for the military or financial institutes with their formal specifications and design methodologies.

Software design was something other people did.

One of the many problems with doing no planning is that it's almost impossible to schedule how long the task will take – and scheduling is something that all good games companies are trying very hard to get better at. Bad scheduling contributes to people working late nights and weekends; it makes games late and burns people out.

It was a few years ago that we started to formalise our planning procedures and called them pre-production. Each programmer pre-produces every non-trivial programming task, generally spending 15 to 20% of the time on a task doing the pre-production. The numbers are very hand-wavy but it's useful to give people a vague idea of how long they should plan to be pre-producing. If a task feels like to should take a couple of weeks then you should probably spend a couple of days pre-producing.

Pre-production often involves writing some code; this isn't just a pen and paper exercise. It'll involve tightly defining the requirements of the software, writing some sample code, familiarising yourself with other modules your code needs to talk to and writing up a document detailing exactly how you're going to approach the task. The act of committing all this to a document forces people to really think about what they're doing.

The end result should be a document that details exactly how the task is to be done. At this stage there should be enough knowledge about the task that the programmer can create a schedule that he's comfortable with. It's this schedule that the programmer will be working to, not a schedule that's presented to him by his producer.

The final stage is to publish the pre-production and schedule for peer review. We use a commercial wiki called Confluence but any method for sharing documents will do. The work is published so that other programmers (or anyone with an interest in the task) can comment on whether the task will fulfil its requirements and whether the breakdown is accurate and realistic.

I think it's fair to say that no one's going to be designing missile systems using these techniques but they do make our development process a little less random than it used to be.

KEYRELEASE

PRODUCT: Sieve
COMPANY: Codeplay
PRICE: Not applicable
CONTACT: : +44 131 466 0503
W: www.codeplay.com

Parallel Lines

Multicore architectures are everywhere but it's proving difficult to make them sing. Scottish middleware company Codeplay has an idea…

You don't have to be a genius to know it's hard to program software for multicore systems. Just ask anyone developing a game for PlayStation 3. Unsurprisingly though, the situation is even harder for those poor souls trying to improve the working lives of developers. Making the tools to take full advantage of four, six or eight processors means you not only have to understand those architectures, but you also have to know what the software developers are trying to do as well.

Andrew Richard, CEO of Edinburgh-based company Codeplay has experienced both sides of the divide. Back in the late 1990s, he was head of software development at Gateshead developer Eutechnyx. He left to form Codeplay, which initially worked on a product to speed up programs working on then exotic architectures such as the PlayStation 2's Vector Units.

But with multicore chips found in the majority of new laptops, not to mention game consoles, desktop PCs and, in future, mobile devices too, Richards is now working on a more generalised approach.

Called Sieve, or more fully the Sieve C++ Parallel Programming System, it's designed to help programmers reduce the numbers of dependencies in their C++ code, and hence allow it to be easily distributed across many processors.

"One of the issues we've always had with coders is trying to teach them that they can't rely on reading the result of a process into a consecutive process," Richards explains. "If you're going to do one thing and then read the result of it, that's a dependency so there's no parallelism."

What Sieve does is provide an approach to reduce these dependencies by flagging up areas that programmers need to rework. These are then broken down into a block of so-called Sieve code. By definition, this can only contain dependencies on named local variables. Global variables or pointers to external data can never have dependencies within the block.

In this way, Sieve blocks can be automatically split up by standard compilers and distributed amongst multiple processors. It also means that any dependencies that remain inside a Sieve block can be easily identified by the compiler and queried so the programmer can understand which areas of code still need to be worked on.

"Multicore is in everyone's PC. Few understand its full potential…"

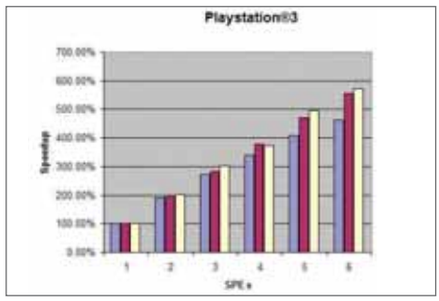
Andrew Richards, Codeplay

Richards says Sieve can be viewed as a pre-process step to ensure the compiler can auto-parallelise code. "What we're doing is acting as a front end to other compilers," he says. As well as acting as an extension to a C++ compiler, Sieve also contains a multi-core linker and a runtime to schedule the processes.

"Our approach is that people have existing code for game engines and that like, so what they need to be thinking about is which section of their code they want to run in parallel and then marking it out as a Sieve block," Richards says. "Our system will then provide feedback concerning the changes you need to make to enable it to run in parallel."

Yet, as is often the case with innovation, Sieve itself remains a work in progress. Richards hopes to have something available by mid-2008, but as Codeplay deals directly with hardware manufacturers, there's no certainly what architectures Sieve will eventually be released for. Games remains one of the obvious options: Codeplay's already worked on the compiler for Ageia's PhysX hardware, as well as being approached by companies interested in the possibilities of creating Linux-based clusters using retail PlayStation 3s.

"Sieve's going out to some university research projects and a few companies for evaluation," Richards confirms. "We're trying to get some feedback about whether it does what we say, and what it needs to do in order to solve developers problems. The whole multicore market is still at a very early stage and although multicore is in everyone's PC, few understand its full potential."



Top: Andrew Richards, Codeplay CEO

Middle: The effect of gaining parallelism using Sieve can be seen for several benchmark tasks

Bottom: Codeplay provided the compiler for Ageia's PhysX hardware

All or nothing

One of the oddities of parallelism is Amdahl's Law. This defines the theoretical performance increases you can gain by improving various chunks of your program. For example, if you parallelise half your code, the maximum overall performance boost you can gain is two fold, no matter how much you parallelise or how many processors you use. If you parallelise 80 per cent of your code, you can theoretically gain a four-fold boost though.

It's this that provides one of the key issues when it comes to multicore performance. Despite hardware benefits such as high performance to power ratios, when it comes to software, you need to be able to parallelise large amount of code to make the most of multicores.

"Your performance improvement is far more dependent on how much of your program you can parallelise and much less affected by the performance increases of the individual bits," explains Andrew Richards. "There's a tendency for coders to think 'If I can get this bit of my program to go really fast, I'll improve overall performance.' Of course, this can be interesting from a technical point of view, but it's not a particularly efficient use of your time."

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VIRTUAL HEROES ARE SERIOUS ABOUT GAMES

Mark Rein profiles a new Unreal Engine 3 customer…

THE SERIOUS GAMES Initiative (www.seriousgames.org), a Washington based effort that works to develop and track the field of serious games, currently estimates that the market for serious games is $100m – and predicts that it will grow to be a billion dollar market within the next decade.

Virtual Heroes recently lured famous videogame creator Takayoshi Sato to their offices in North Carolina from Electronic Arts Los Angeles studio, where he was producing an original game. The creator of Konami classics like *Silent Hill* said he enjoys working with Unreal Engine 3.

"As the director of visual design, I'm pushing what we can do with art using the Unreal Engine 3," said Sato. "This technology allows a relatively small company like ours to create these types of large projects. It gives us a very solid foundation to build upon. In the past, a small developer would have to create everything from scratch. We'd need an engineer for the particle engine and all those types of details. Now we don't have to worry about that."

Sato is working on one of Virtual Heroes' premiere initiatives. This project is a new online game, in the same vein as *America's Army*, that has been commissioned by the United States Department of Homeland Security to teach emergency rescue workers how to react to natural and terrorist-related disasters. The game will allow 64 players to work together in any one of five scenarios set across a fictitious U.S. city that's actually an amalgamation of New York, San Francisco and Los Angeles.

"What we're doing has social messages and themes," said Takayoshi. "This could be the closest thing to pure art that a game company has ever done."

Sato said there are similarities between his work in the consumer gaming industry and his new foray into serious games – authentic virtual humans are still the focus and serious games still need to be entertaining. What it adds is an emotional element, especially with the disaster scenarios that this game offers, which includes everything from earthquakes to biological incidents and chemical agent releases.

Virtual Heroes uses Unreal Engine 3 to teach emergency rescue workers how to react to natural and terrorist-related disasters.

Virtual Heroes CEO Jerry Heneghan said that Unreal Engine 3 has allowed his small team of developers, which includes scientists, Hollywood veterans, educators, instructional designers and game makers, to focus on the other aspects of the game.

"There are a lot of things are going on in this game, including vehicle physics with component damage, ballistics, and voice-over-internet protocol (VOIP) where we track all the voice channels for up to 64 players in real-time," said Heneghan.

"The efficiency and robustness of Unreal allowed us to build all of this on top of it. We have other problems to solve besides rendering, networking, dual core GPU usage, user interface and level scripting. Unreal enables us to focus on linking learning objectives to demonstrable performance parameters in the context of 3D learning scenarios while providing a meaningful assessment on the learner's proficiency."

In addition to its Homeland Security project, which is slated to go live in summer 2008, Virtual Heroes is working with a variety of different health industry clients, including Duke University Medical Center, George Washington University Medical Center, National Institute of Health, Agency for Healthcare Research and Quality, Durham Veteran's Administration Hospital, and nContact Surgical.

For more information on Virtual Heroes visit: **www.virtualheroes.com**

FARAMIX ENTERPRISES LICENSES UE3

Up and coming California game developer Faramix Enterprises, announced last week that it has licensed Unreal Engine 3 in conjunction with the development of its next-generation first-person shooter. The CEO of Faramix stated that Unreal Engine 3 "would enable our development team to effectively produce the ground breaking quality we've always envisioned."

UPCOMING EPIC ATTENDED EVENTS:

LYON GDC GAME CONNECTION
Le Palais des Congrès de Lyon
December 4th to 6th, 2007

GDC 2008
San Francisco, CA
February 18th to 22nd, 2008

Please email: mrein@epicgames.com for appointments.

To discuss anything raised in this column or general licensing opportunities for Epic Games' *Unreal* engine, contact: **mrein@epicgames.com**

FOR RECRUITMENT OPPORTUNITIES PLEASE VISIT:
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*Canadian-born **Mark Rein** is vice president and co-founder of Epic Games based in Cary, North Carolina. Epic's Unreal Engine 3 has won Game Developer Magazine's Frontline Award for Best Game Engine for the past three years and Epic was recently awarded Best Studio at the Spike TV Video Game Awards. Epic's Gears of War won Gamespot's overall Game of the Year and sold over 4,000,000 units on Xbox 360.*

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Programmers Jobs - UK

Graphics Programmer
Circa £25k
London PA531F3

My Client is the creator of many of the UK's Top 20 best-selling PC games of all time, specialising in sports management simulations. This development role will run in conjunction with animators and be focussed on improving various aspects of animation within our titles. They require excellent C++ programmers with a passion for football, in addition to this knowledge on physics and 3D animation would be a bonus.

Lead Programmer
£DOE + Benefits
Surrey PA406F2

My Client is one of the foremost developers in the UK with a number of Studios around the UK and a long list of successful titles to their name. They have an excellent relationship with Nintendo and have just signed an original title to develop for the Wii console. They are looking for a programmer to lead this team. The ideal candidate will be someone with Wii experience looking to step up to a Lead position. A passion for innovative gameplay is essential, along with an excellent technical knowledge.

PS3 Lead Programmer
£Excellent + Benefits
Manchester CM1976F3

Our client is a newly formed internal development studio for one of the world's leading publishers. Their expansion plans for 2007 are extensive with a number of AAA titles already lined up. Successful candidates will have previous Lead experience, excellent problem solving abilities and communication skills alongside excellent C++ and 3D maths knowledge.

Programmers
£Excellent + Benefits
Midlands PA14F

My Client is the most prominent developer/publisher in the UK. Recent investment and an aggressive strategy for 2007 means they have room for the most talented and experienced programmers. They are currently working on a number of next-gen titles that are destined to be genuine chart toppers. They are interested to hear from anyone with a real passion for games, endless development talent in any area and a desire to work for a forward thinking company with a real pedigree.

Production Jobs - UK

Head of Product Development
to £80k DOE + Benefits
Buckinghamshire CW1860DD

My client is looking for an exceptionally talented Head of Product Development who is ready for the challenge of helping develop their portfolio. Candidates will possess a proven track record of success in at least 7-8 delivered projects, have a history of directing complex real time projects on multiple platforms and have a good understanding of localization process for titles in Europe. Full spec available on request.

Production Manager
£Excellent + Benefits
London CW82SP

My client is one of the leading software developers in the world and a major player in the home entertainment market. The are currently looking to recruit a Production Manager for their London based Studios. Reporting directly to the Games Director this role will be the 'go-to' position for all internal development matters for both Creative Leads and Producers. The chosen candidate will be responsible for the timely delivery of all titles developed by the group both internally and externally.

Senior Internal Producer
£35k-£45k DOE + Benefits
Oxford CW484SP

Our client is one of the longest running studios in the games industry. Based in Oxford they are seeking to recruit an experienced producer to join their development teams who are working on their latest next-gen FPS project. Candidates must have at least 2/3 full production cycles completed from concept through to launch. They must be easily adaptable with a keen interest in FPS titles, and also have experience in managing a large team of 60-80 people.

External Producer
£35k-£45k DOE + Benefits
London CW33EP

Our Client is one of the UK's leading publishers of computer games and one of the world's leading developers and publishers of entertainment software. They are currently seeking a External Producer to be based at their London Studio. You should have exceptional project management and organisational skills, experience in working with external development teams over short and long production periods, and superior knowledge of production methodologies and their application. Full spec available on request.

Overseas Jobs

Technical Director
€Neg DOE + Benefits + Stock options
Germany CW02222TD

Our client is a publisher for electronic games focusing on PC titles that are suitable for children and their families. They are currently searching for a Technical Director to oversee the whole programming process from initial architecture to completion. The ideal candidate must have several years of industry experience and be passionate about games, have a proven ability to lead and direct teams, with proficient verbal and written English language skills.

Creative Producer
€Neg DOE + Benefits
Germany CW02222CP

Our client is a publisher for electronic games focusing on PC titles that are suitable for children and their families. They are looking for a Creative Producer to join their ever growing team to work closely with the Creative Director to deliver products on time, within budget and of high quality. The Ideal candidate will possess a knowledge of games development from many different perspectives, experience with PC or console titles, and also be familiar with project management methods.

Senior Engine Programmer
€ Excellent
Germany PA2157F

My Client specialises in developing new and existing IP for use on the major handheld consoles. They are currently developing a couple of very highly anticipated DS and PSP titles. They are looking for someone to maintain and develop their engine code for use on DS, PSP, Wii and XBLA. They are looking for someone with excellent C++ knowledge and an understanding of low-level console architecture. Having shipped at least one title would be a significant advantage.

Senior Software Engineer
$Excellent
Vancouver LC2026F1

My Client is part of one of the largest Independent Games Developers in North America. They have been creating titles for 15 years and have released over 100 titles in that time. They are looking for a Senior Engineer to lead a development team. The candidate will be responsible for developing, maintaining and documenting game software whilst leading a team of 5 to 15 engineers. Candidates must be excellent programmers with at least 4 shipped titles. The ability/ experience to lead is essential.

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HEARDABOUT

Sega Rally

John Broomhall talks to audio director Tim Bartlett on the rebirth of Sega's racer…

FORMATS: PS3/360/PC/PSP
DEVELOPER: Sega Racing Studio
PUBLISHER: Sega
AUDIO TEAM:
Audio Direction: Tim Bartlett
Sound Design: The Audio Guys
Original Music: Bob & Barn, Side UK

THE NUMBERS:
Approx 5500 sound files, approximately one hour of music and a small amount of pace note dialogue for speech

The Audio Guys' Tim Bartlett. He calls Sega Rally a game that is "stlyised" both graphically and sound-wise

The Audio Guys roadtested (and wrecked) plenty of automotive materials to get the audio right

It's not every day you get paid to think the unthinkable, but for *Sega Rally*, the audio team were invited to re-think their approach to the genre by studio director Guy Wilday.

For The Audio Guys' Tim Bartlett, a veteran of driving games such as *Colin McRae* the outcome was a radical shift. He explains: "There's little concept of engine loops in *Sega Rally* though we haven't gone wholesale for synthesis. Our focus is real-time manipulation of set-piece recordings. If you use frequency analysis to compare the output of a traditional cross-faded engine loop system against real car recordings a lack of accuracy is soon apparent. It's easy to assume that when you artificially shift the pitch of engine loops, the harmonic relationships between different elements will stay the same – but it's not so in real life. There's a big difference because of the complex relationship between those elements, depending on RPM and engine load."

Whilst acknowledging how well the engine-loop approach has served driving games previously, Bartlett figured that with hugely enhanced CPU power available on next-gen consoles, it might now be feasible to manipulate sample data at run-time in ways that would previously have been dismissed. "We still use sampled assets from rolling road recording. But coding is now leading the way in controlling these sounds in real-time according to RPM and load with some serious time-stretching and synthesis akin to something like Melodyne – we are manipulating set-piece recordings of car behaviours to match the players' driving," says Bartlett. "It's no technical 'walk in the park' and requires a serious programming investment, but I can safely say I'd never go back to a loop-based approach."

For the raw material, around 20 cars were recorded on a dyno with four channels (engine, exhaust, gearbox, turbo) being captured at 24-bit 96kHz, a process not without its headaches. Adds Bartlett: "We had access to a rare Ford RS200E worth about £250,000. Whoever installed the brand new gearbox had made a slight oversight – no oil! As we ran it for it's first time out that year, it went BANG, literally leaping off the rollers and doing about £15,000 worth of damage – very scary! Amazingly, when it was all fixed, they brought it back."

Another vital area of *Sega Rally*'s audio is the rolling sound of wheels on track, together with the debris kicked up. Innovative design meant a more granular approach, as Bartlett explains: "We have a dynamically changing blend of two surface elements – top and bottom with the sound mix determined by how much of the top has been worn away. Each wheel can potentially be on two surfaces, so that's four possible surface sounds for each wheel. We have two playback types – a) the constant 'rolling' sounds and b) the 'kick-up' system dealing with what's thrown up into the wheel arches which uses a full-on granular approach. Avoiding sound library CDs, we bought ourselves a car door from the local scrapyard, put lavalier mics inside it and postioned a pair of 411s slightly further away. We recorded all manner of material being thrown at the door to collect our sound 'granules' which are logically played back according to car speed and the looseness of the surface. Add in the surface loops and the result is a truly coherent overall sound that makes the car feel very connected to the road."

This combination of engine and surface sounds is further enhanced with environmental DSP – reverbs assigned to each side of the car, which change according to the environmental detail. Adds Bartlett: "To me, it's just another tool to reinforce the 'reality' of what you're seeing on-screen – the more audio tricks you can use to fool the brain into buying the overall experience, the better. Some levels have 300 different reverb pre-sets."

Compared to some of his previous driving game productions, *Sega Rally* gave Bartlett the opportunity for a little creative license: "There are less reasons to stick to realism than in a more pure sim, so if we felt that boosting or distorting engine sounds would work well creatively, we went right ahead to make them sound ballsy in the game. It's a stylised title and we've reflected that in the both the music direction and a generally 'larger than life' approach to sound – with the onus on fun!"

John Broomhall is an independent audio director, consultant and content provider
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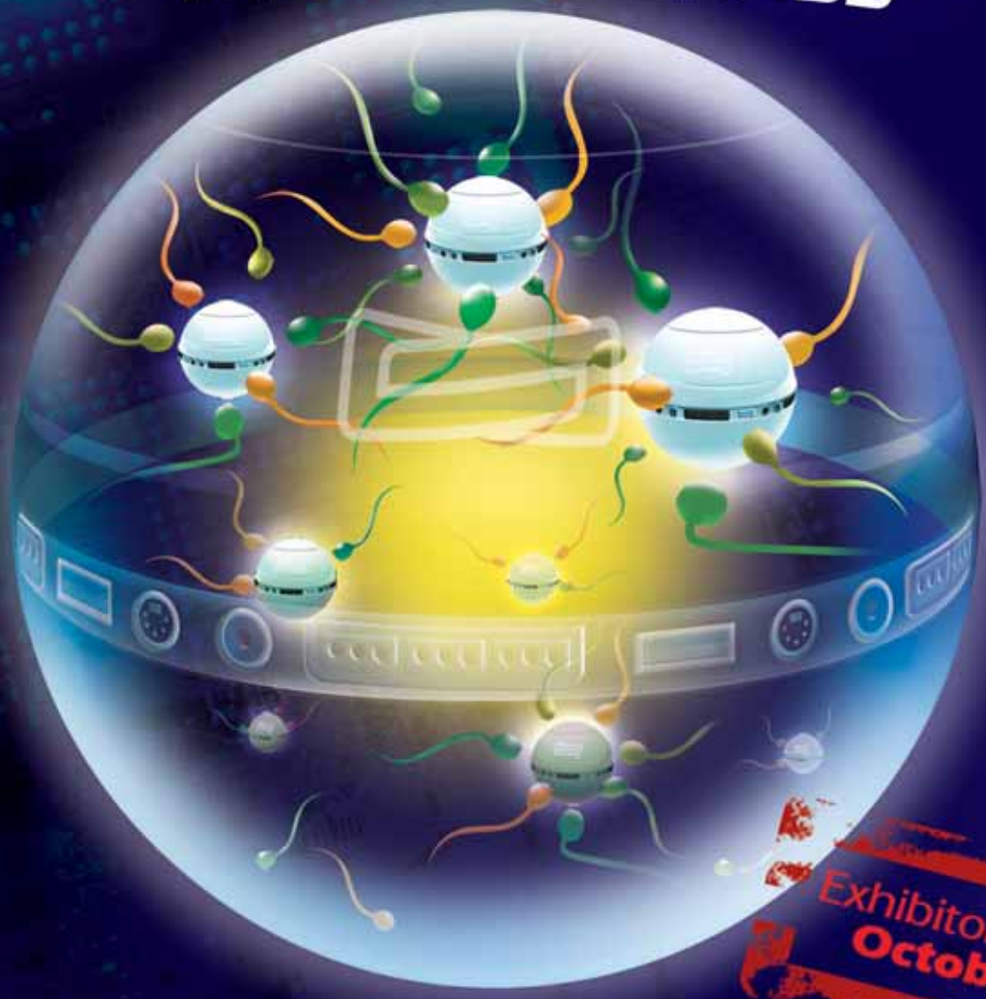

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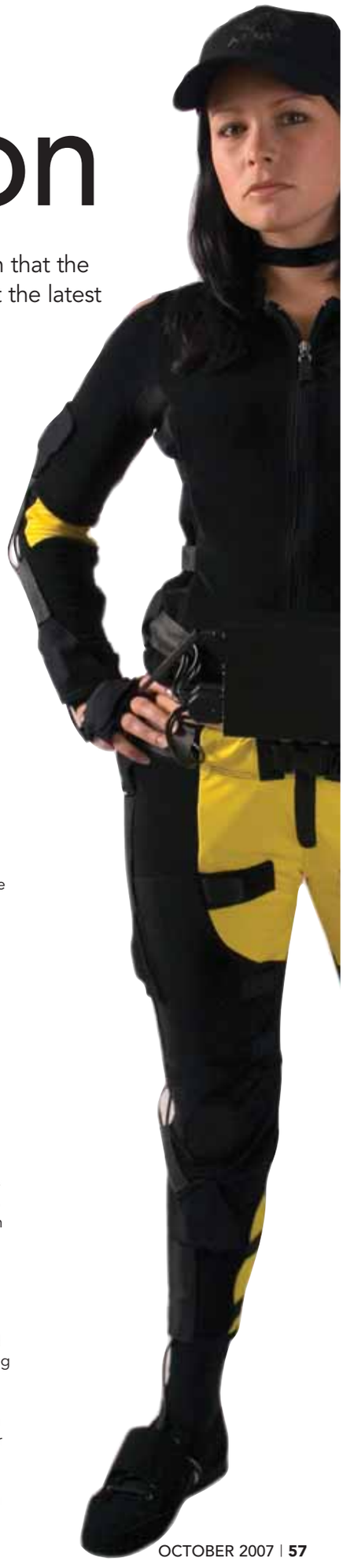
Poetry in motion

It might have been around for a relatively long time, but that doesn't necessarily mean that the motion capture industry is slowing down as it reaches maturity. Ed Fear takes a look at the latest movements in the field…



This generation means 'more': it's now an undeniable fact that stretches across all of the game related industries. The motion capture industry is no exception, but it's also seeing other changes as well – changes in demands, changes in accessibility, and a constant change in technology.

One thing that many are seeing is more and more requests for detailed hand and facial movement capture, as the fidelity of modern graphics increases to an extent where accurately-captured performances are required to minimise the 'uncanny valley' effect.

"Finger capture and full-body is now a must-have for a lot of clients," explains Mick Morris, MD of mocap service provider Audiomotion. "We also have quite a few large clients doing full performance capture – hands, face, full-body and audio.

"It's leaps ahead of the technique where you record the facial capture at the voice recording stage – you get a beautifully synchronised performance from your actors just as you would if making a movie."

Mike Stilgoe, TT Centroid's director of operations, agrees: "The need for facial and hand motion capture is more prevalent as we see more dialogue-driven production."

In previous years Centroid's workload has been heavily weighted towards games, but has seen more and more of its business come from the film and television sectors in recent years. In a striking parallel, Stilgoe notes the way in which motion-capture data is used in games is also dovetailing with other fields thanks to gaming's increasing cinematic and narrative bent.

"The type of work we used to do entailed a lot of 'in-game' motion and looping, but these days there has been far more demand on contracted pieces of work for completed 'live rendered' cut-scenes – which includes motion capture as well as a host of other services, such as key framing, model building and auditioning the correct actors for the job."

The other area in which motion capture is being used more is in pre-visualisation, adds Animazoo's marketing director Jo Hull: "Our systems, being set up so that a single operator can make quick revisions, have started being used a lot for pre-visualisation work."

> ***"The old adage – do what you do best and outsource the rest – has never been truer than today"***
>
> ***Mick Morris, Audiomotion***

MO' MONEY, MO' CAPTURE

But perhaps the biggest developments in the motion capture industry of late is the availability of lower priced kits, such as Animazoo's portable gyroscopic systems or the entry level equipment from optical specialists Vicon, leading many medium-sized developers to purchase their own solutions.

It's certainly an understandable trend – no matter how skilled your outsourcing partner may be, doing everything in-house avoids the many planning issues and communication difficulties that can easily spring up when working together with another company.

"Investing internally means you can continually run shoots as and when you

Audiomotion's setup can capture hands, body, facial expression and audio performance concurrently

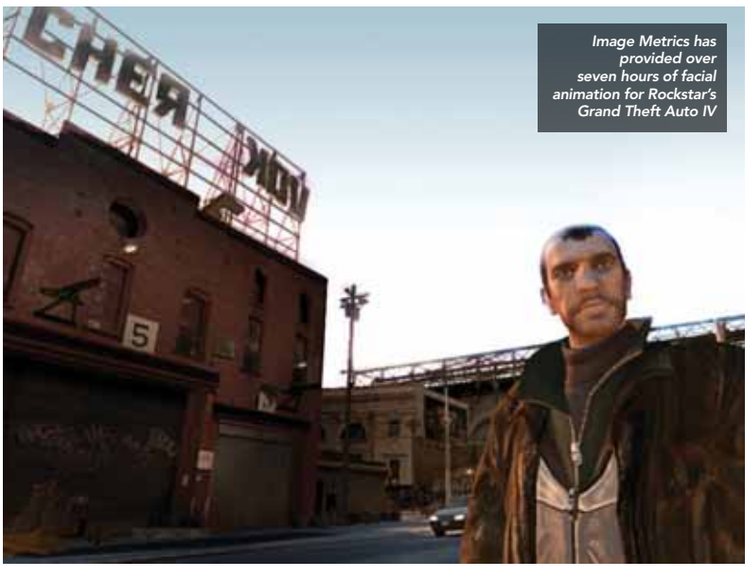


Image Metrics has provided over seven hours of facial animation for Rockstar's Grand Theft Auto IV

require, tweaking shots and scenes with no pressure on external studio times," explains Vicon's Andy Ray.

"You can quickly get in and get your work done with no external company constraints. It's also easier for developers to see the scope for including more motion capture in their work. It becomes a tool for development, as well as a valuable addition to their portfolio for investors and publishers."

On the other hand, those companies specialised in mocap are just that – specialised – and therefore know exactly what they're doing. "We have spent ten years in the entertainment industry perfecting the service; it's what we do well, and that's why our clients use us. The old adage – do what you do best and outsource the rest – has never been truer than today," says Morris.

"Our clients don't want their financial situation pressurized by such a heavy capital expenditure. Plus, it's never been a case of just pressing a few buttons and off you go - you need to hire or retrain staff to run the kit and setup working pipelines into whatever software you are using. If it was easy then everyone would be doing it."

Stilgoe shares the concern that the equipment wouldn't be used enough to justify the expenditure. "There are very few games development companies that could keep an in-house facility suitably busy, motivated or enthusiastic. It could easily remain a toolbox left in a corner until needed."

Not only could it lie unused, adds Artemdigital's Richard Hince, but technology constantly progresses – something the mocap studios are placed to be able to solve.

"Superficially, on big projects, it might seem attractive – but when you look at the situation over the long term, fully cost space and manpower, and factor in things like management issues and the need to keep everything current, the situation is much more complex.

"Yes, for some larger developers with lots of internal resources it might make sense – but by patronising motion capture facilities most developers get absolutely everything they need, in a timeframe that suits, without having to spend a fortune."

Even Vicon, which sells direct to studios and services companies, concedes that using mocap partners will always have a place in production. "Outsourcing will always be popular," concedes Ray. "It all depends on the specific needs of the project. If the person you want to mocap is in Europe, for example, and your studio is in the US, then you'd simply outsource the work to a European studio.

"It's worth pointing out that some of our customers do both. They'll own their own system in-house but still outsource some of the work, maybe based on the amount they have on or the complexity of the shot."

SOFT LENS

And what does the future hold for mocap? There's a significant amount of growth and research in marker-less technologies *(see 'Magic Markerless')*, but for ordinary marker capture the future seems more stable. "We'll see an increase in existing capabilities – in other words, even more of the same – more capable cameras, more custom sensors, and better 3D processing," says Ray.

A possible future source of huge productivity improvements won't come from the hardware, however, but from the software that accompanies it. "Hardware and software will improve incrementally in the future, but the main benefits will be reaped from software developments," explains Hince – a theory mirrored by Animazoo's continual updating of its software and Vicon's investment in the new Vicon Blade software, a single unified toolset designed to let games developers and others using motion capture rigs have tighter control over the data they collect.

Further on the non-hardware front, Image Metrics' Nick Perrett agrees that improvements will come from better pipelines and improved methodologies.

"I think that if the mocap companies actually spoke to the programmers and the artists a bit more, and looked at facial animation right from point of capture, right through to the way it's compressed – there's so much scope for improvement in that. It's not something that is a radical new thing in technology – it's just new business processes."

"The future of motion capture is – well, forget motion capture altogether..."

Nick Perrett, Image Metrics

Magic markerless

Some of the biggest developments happening in the motion capture technology space come from markerless systems. One company leading the charge is Animazoo, who claims that its mechanical and gyroscope-based equipment revolutionises motion capture for small studios.

"Using gyros means there is no need for fixed cameras or the restriction of a studio environment," enthuses Jo Hull, Animazoo's marketing director. "The equipment is totally portable and is even operational outdoors, and can also be run without the need for a second operator."

While fully markerless capture is something that many still see as nothing but a pipe-dream, one thing it *can* do well is facial capture. Image Metrics' system analyses movements and skin tone changes in actor performances to generate facial motions, which can then be mapped onto facial rigs created in conjunction with artists.

But, oddly, Image Metrics sees the future of marker-less capture as being, well, capture-less too. The company is currently working on a facial animation synthesis engine that will be trained with thousands of hours of facial performances, able to dynamically generate expressions given prompting.

Image Metrics' Nick Perrett explains: "The future of motion capture is, well, forget motion capture all together. Imagine your character ran into a room and came across a character he'd never seen before, then that game engine might say 'right – this character needs to act surprised but, because he's never seen you before, he needs to seem a bit confused as well.' It's the ability to synthetically generate a piece of animation from all of our training data that says 'here's 90 per cent surprised and ten per cent confused.'"

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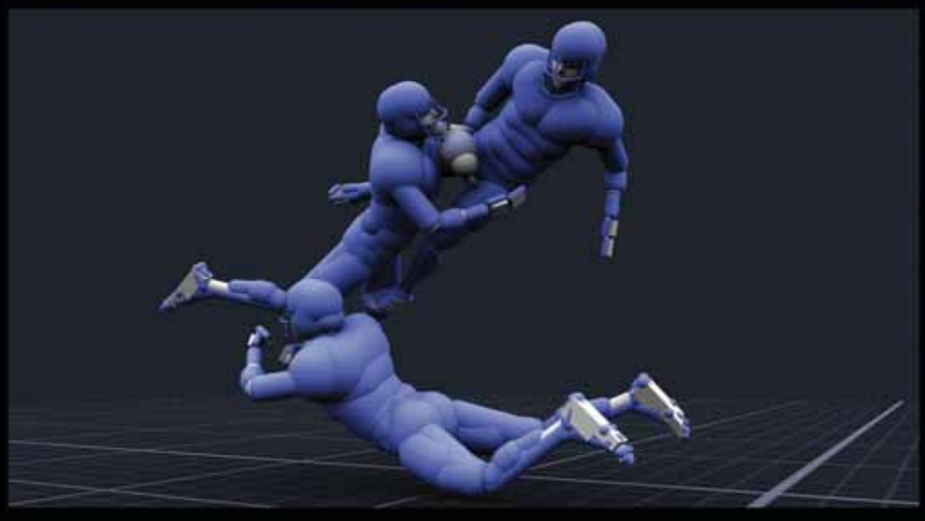

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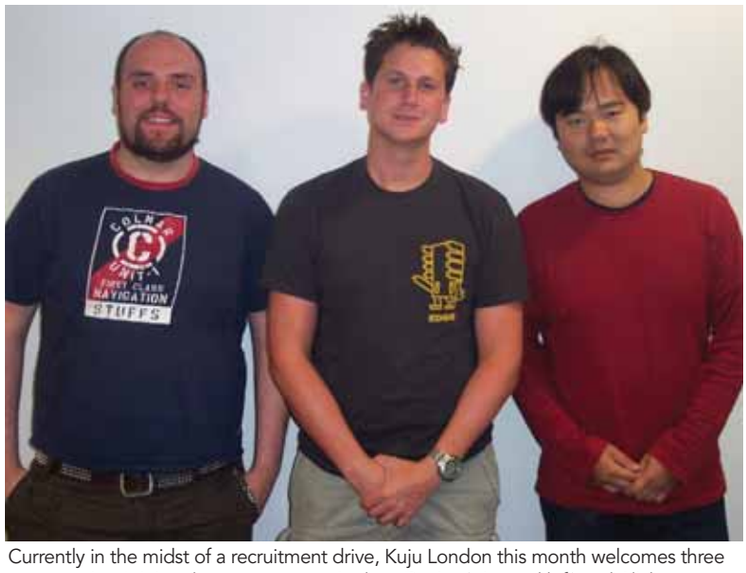
Studio News

Games development's movers and shakers.
This month: Kuju London continues to expand…



Currently in the midst of a recruitment drive, Kuju London this month welcomes three new recruits. Joining the company are Andrew Davies (*pictured left*) and Alick Goldenburg (*centre*), both gameplay programmers hailing from Sony London and EA Guildford respectively.

Also entering the company is Yota Wada (*right*), previously of EA, who joins the Kuju London management team as development director.

"We're delighted at being able to continue to attract such high quality candidates to Kuju London, and believe they will contribute significantly to our ongoing projects," said studio head Ian Johnson.

www.kuju.com

Industry veteran Mike Merran has joined Spanish game publisher Virgin Play as development manager for their Virgin PLAY and V.2Play brands.

Merran has worked with and for various companies in his 20 years in the industry, having had stints at Climax, Crawfish, Acclaim, Microsoft and Virgin Interactive. Most recently, he has worked as an account manager at Sony and as development manager at NCSoft, helping them secure the exclusive PS3 agreement it recently signed with SCE.

Tim Chaney, president of Virgin Play, commented: "Mike first worked for me in 1992 at Virgin Games. He is a focused, dependable, skilled and straightforward individual who will add much to our evolution over the coming years."

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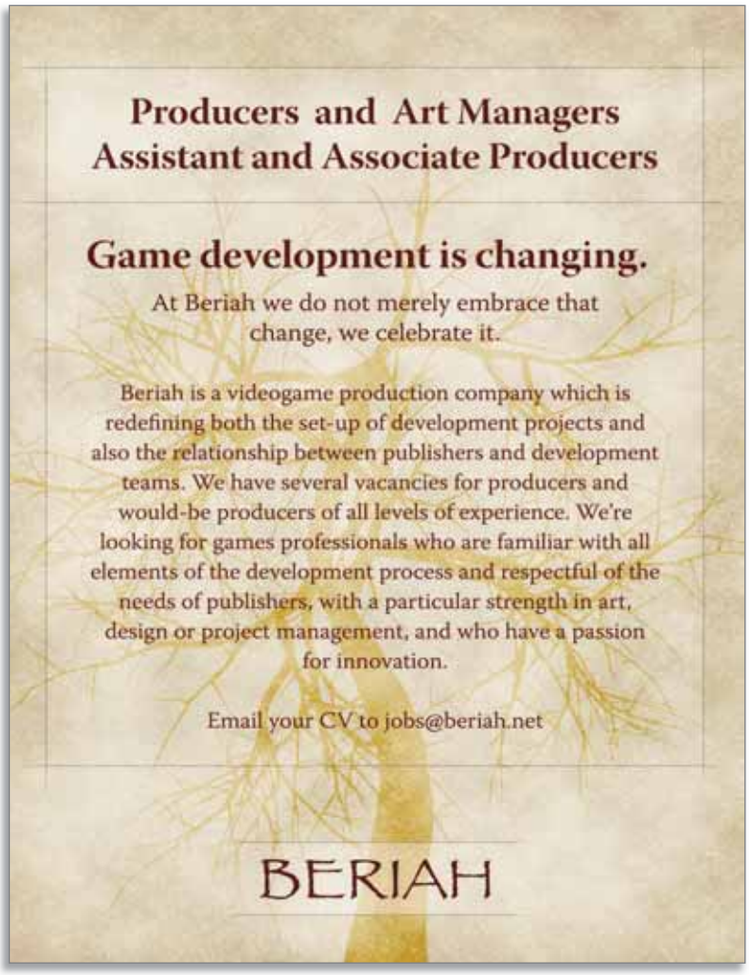
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Tools News

Blitz gets brainy

Blitz Games has become the latest developer to adopt Kynogon's Kynapse AI middleware for the development of a PS3 and Xbox 360 title.

It's quite a surprise for the independent studio to licence third-party middleware, as Blitz Games CTO Andrew Oliver famously advocates that developers benefit greatly from building and using their own technology.

On the topic of why Blitz has chosen to licence a third-party module to complement the BlitzWare platform, Oliver said: "On this occasion we needed a very quick start.

"Since the game is very AI intensive and with several of our other development teams in the middle of their own next-gen games, we decided to turn to a third-party solution on this occasion, to guarantee success to our client."

"We therefore took a detailed look at the architecture and tool-chain used by a number of AI middleware solutions and found that Kynapse provided the best fit with our own methods of production."

Kynapse will be used alongside the BlitzWare platform, enabling Blitz to bolster its familiar in-house technology with Kynogon's crowd AI expertise.

Pierre Pontevia, CEO of Kynogon SA, added: "We are delighted to be working with Blitz Games on this new exciting project. Blitz has an unrivalled reputation within the industry for the quality of its technology, and we are honoured to be providing middleware to the company."

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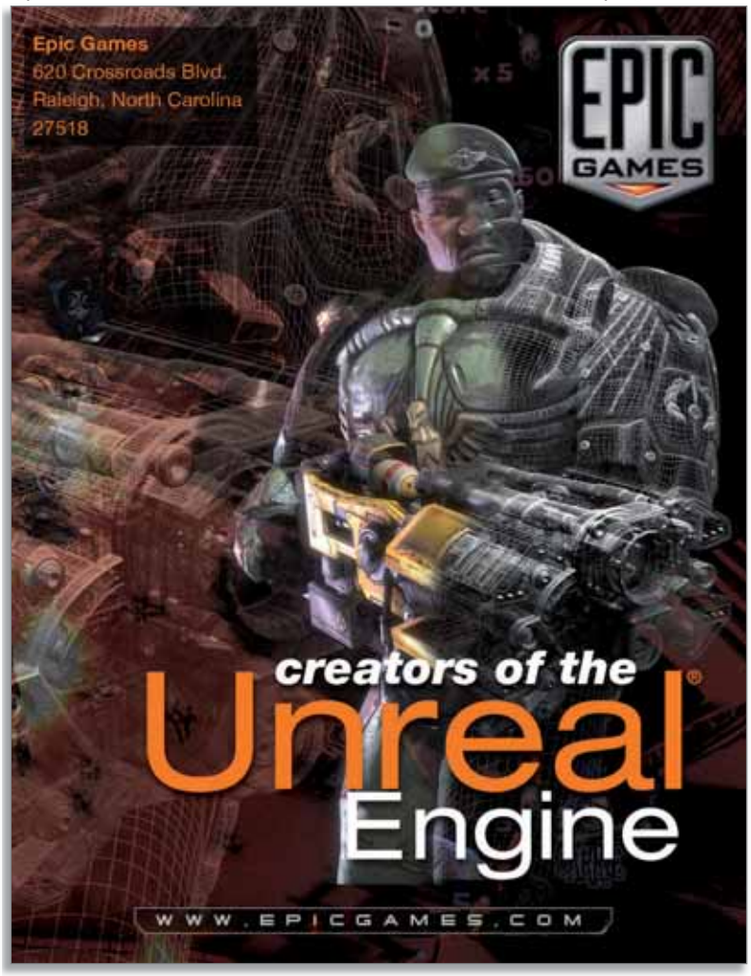

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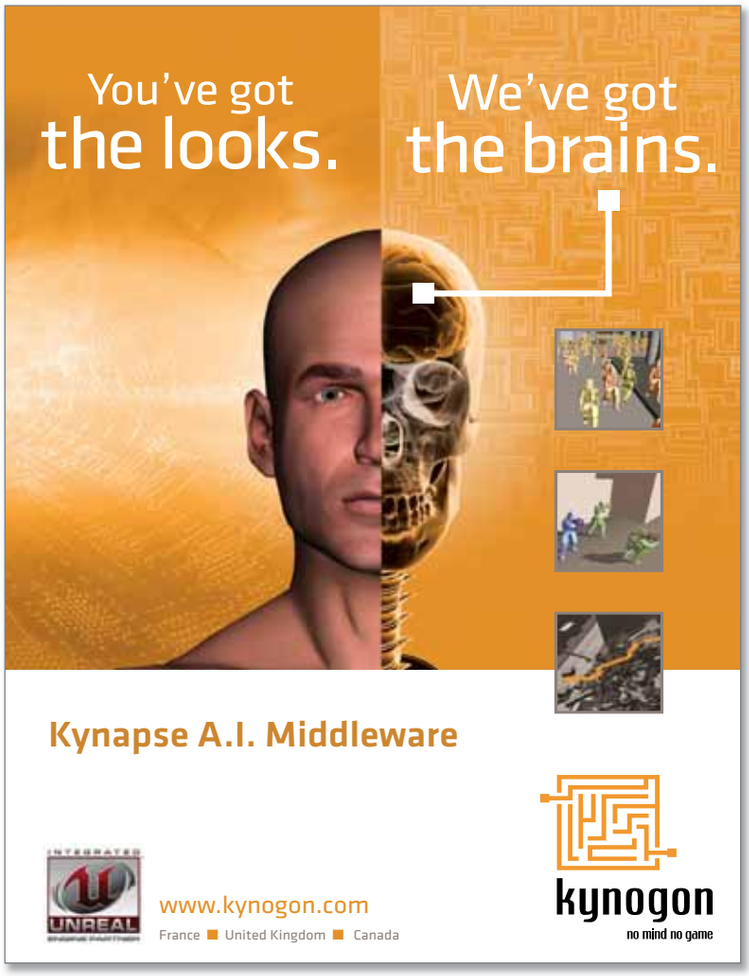
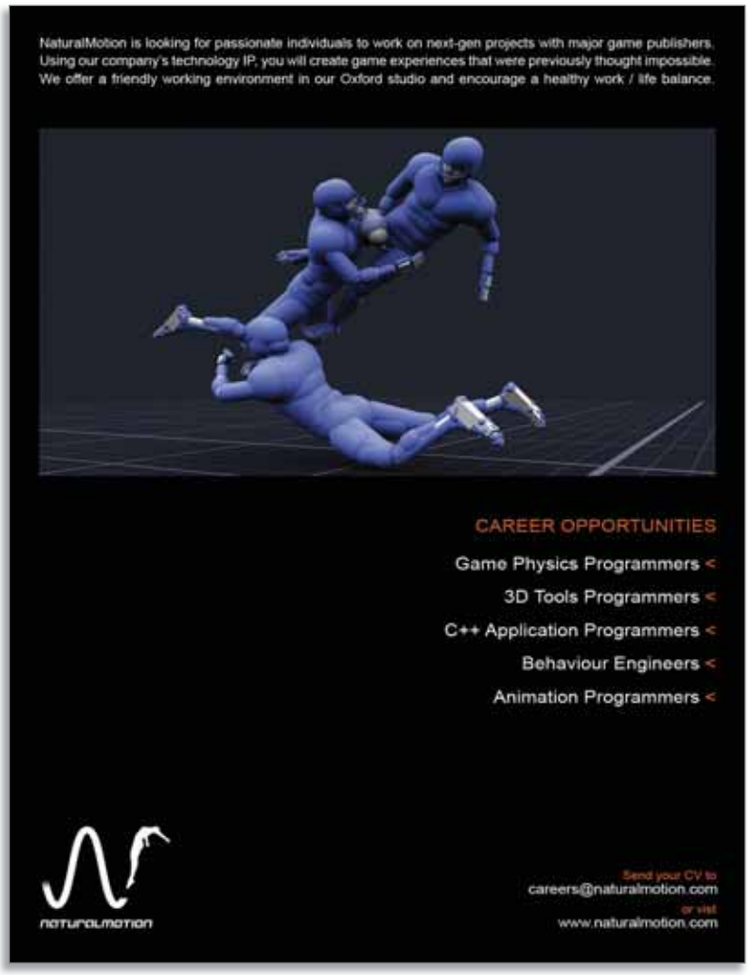


Natural Motion www.naturalmotion.com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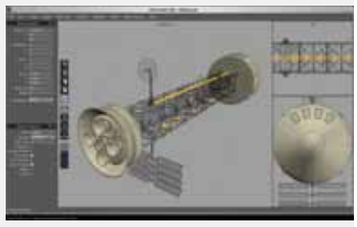
Tool Spotlight

SILO 2.0



Organic sculpting applications are all the rage these days, but it's fair to say that few can offer the value-for-money that Silo does – because despite scrapping with the best of the subdivision surface modellers in terms of features, Silo's featherweight $150 price tag is a mere drop in the ocean when compared to its contemporaries.

Available for both Mac and PC, with a single licence covering both versions, Silo allows users to sculpt both organic, high-polygon models and precise, hard-edged objects in one program.

Released earlier this year, version 2.0 added high resolution displacement painting to the toolbox, operating seamlessly with traditional modelling techniques on both the subdivided object and base mesh. Also on the geometry side, artists can now reconstruct new topography on top of existing model data – such as data obtained from scans or other sources – using the new topography tool.

Also new to version 2.0 is support for UV unwrapping within the program, with support for user-defined seams and vertex pinning.

Boasting a fully-customisable, low-key interface and the speed that being a 17Mb download brings, Silo has gained significant popularity within the artist community – even securing recommendations from senior artists at Ubisoft and Epic. Neversoft argue that the low price point and high compatibility with other 3D software places the modeller in a position to benefit any pipeline – but for those unconvinced, a dual 30-day trial and learning edition is available, essentially giving an unlimited evaluation time.

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Services News

IGDA opens special interest group for localisation

The Independent Game Developers Association is forming a new localisation special interest group.

The Localisation SIG is being founded to 'build a stronger community, draw together best practices and processes, and emphasize the requisite international dimension of game content development'.

Led by chair Tom Edwards and co-vice-chairs Heather Chandler and Miguel Bernal, the SIG is now actively seeking members to participate.

According to the IGDA, "participation is open to anyone actively involved and/or interested in game localisation, including those involved with production, content management, design, writing, text/audio translation, global business management, global marketing and all other aspects of international adaptation."

www.igda.org/wiki/Localization_SIG

PARTNERS NO MORE

Partnertrans founders Markus and Iris Ludolf have parted company with their UK office.

The UK team was founded as Partnertrans expanded its operation – recently it opened a North American office to also support the flagship German HQ.

Despite the split, there will be no change to the wider Partnertrans business.

"In the future just as in the past, we will continue to provide world class localisation solutions. We will continue to partner with our clients to maximise the potential of their titles. And most importantly, we will play our part in enriching the experience of the gamers. In the end, caring about the consumer's experience should be the goal of all localisation companies," said Ludolf in a statement.

www.partnertrans.com

SITAR HERO

Games outsource services provider Gameshastra Solutions is to expand its presence in India – and has revealed it is working to close a deal with Activision that would see it producing a version of *Guitar Hero* for India.

Prakash Ahuja, chief executive officer of Gameshastra, told Business Standard that he was looking in Hyderabad for a location that could help take the staff roster 1,000 employees.

"We are negotiating with a couple of private equity and venture capital firms to raise funds by the year end, and the new facility would be fully operational by the second quarter of next year," he said.

"We are yet to close the deal with Activision. We hope to launch the Indian version of *Guitar Hero* in the country by next summer," Ahuja added.

Gameshastra opened its first outsourcing and development centre in Hyderabad, which currently employes 160 staff, in February this year.

www.gameshastra.com

AUTODESK REVAMPS AREA

Autodesk has boosted its online community AREA with an overhaul of the main site and a significant amount of added content. AREA opened last year and has in that time built a membership of 150,000 registered users, all of which are users of Autodesk's 3ds Max, Maya 3D, MotionBuilder, VIZ 3D and FBX file format.

The site's content, a mix of tutorials, tips, forums and galleries, is largely user-generated – but Autodesk has upgraded the site itself following a successful first year of activity.

Additions include an entirely new cross-platform architecture that supports Windows, Macintosh and Linux OSs, and a new tutorial system that lets users quickly and easily lay out and submit tutorials. 60 new user-generated tutorials for 3ds Max and Maya, covering game development, post-production and design visualization, have also been uploaded, as has a new gallery and a script, material and plug-in sharing facility.

area.autodesk.com

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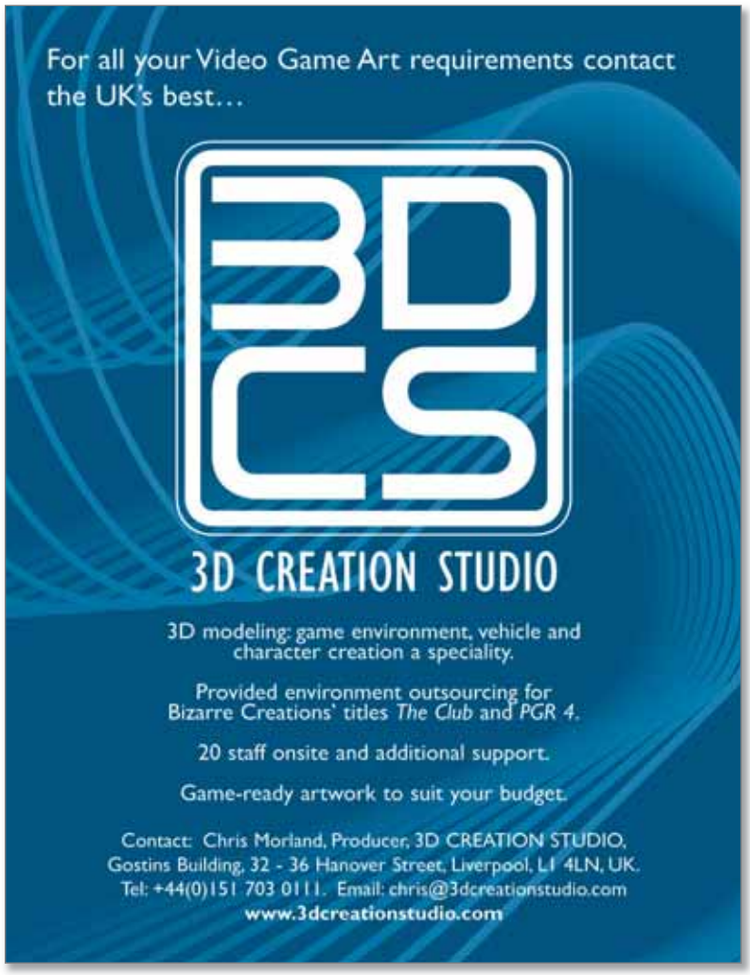
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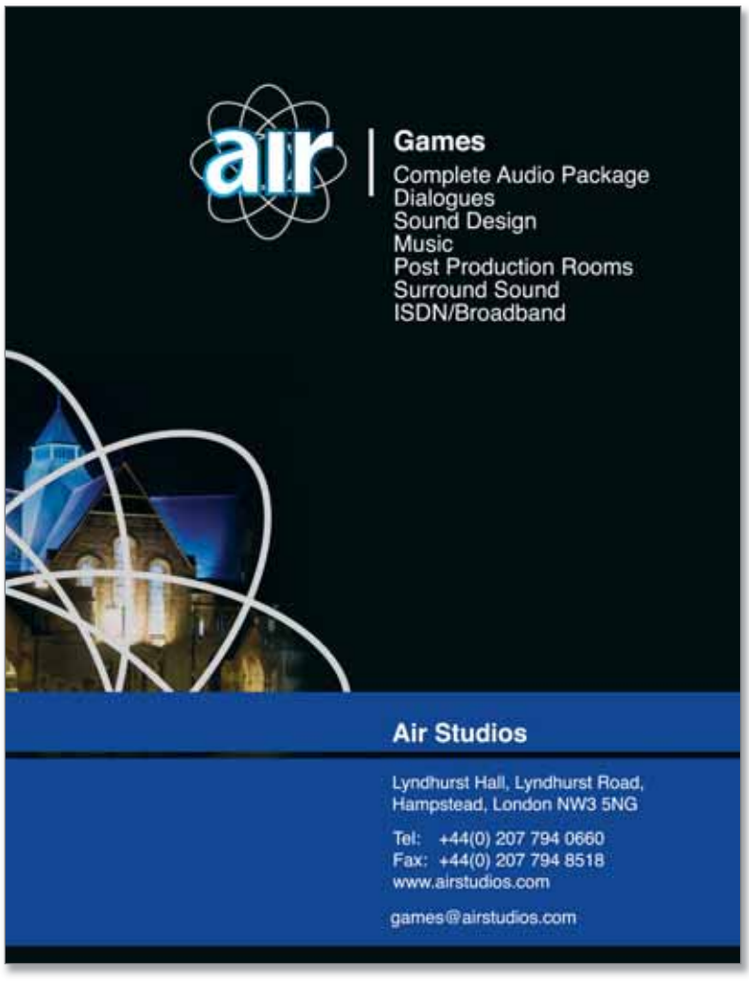

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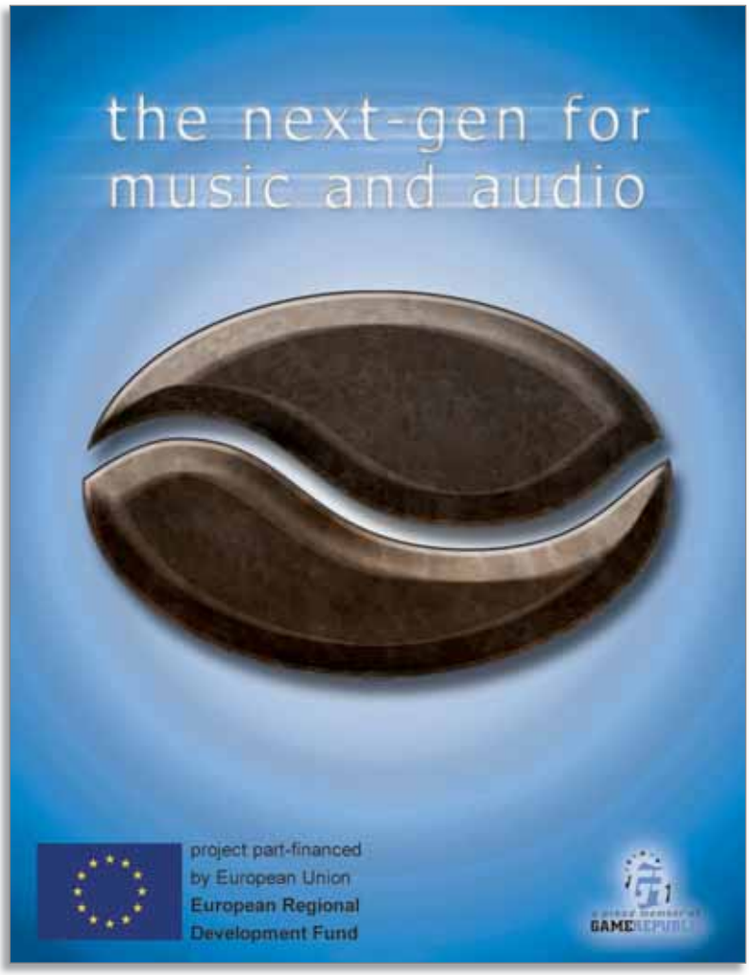

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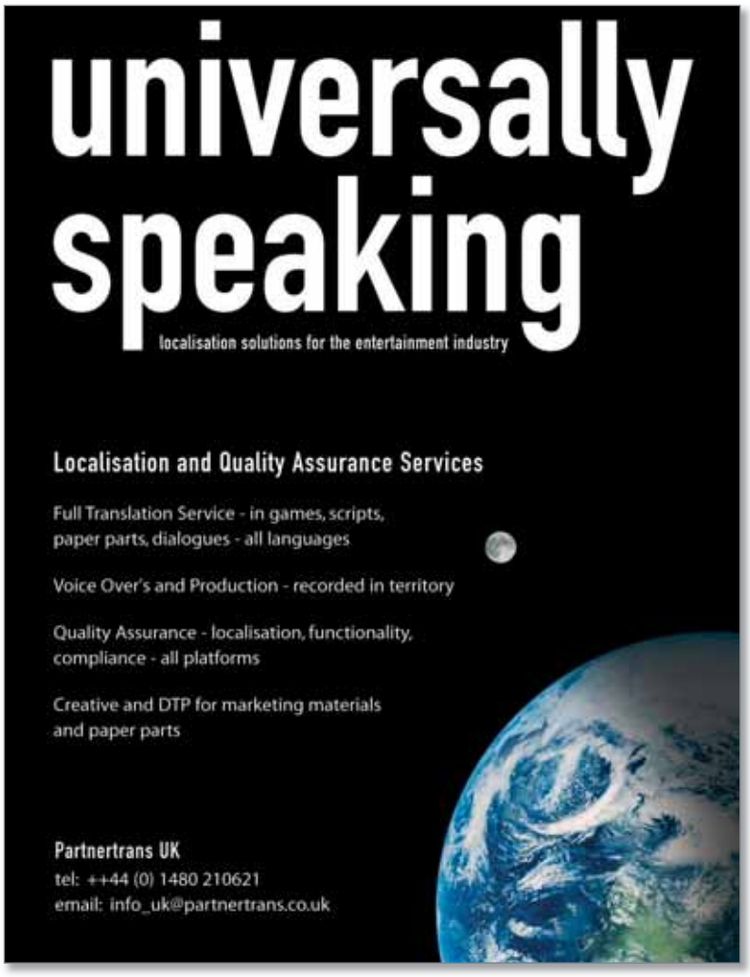
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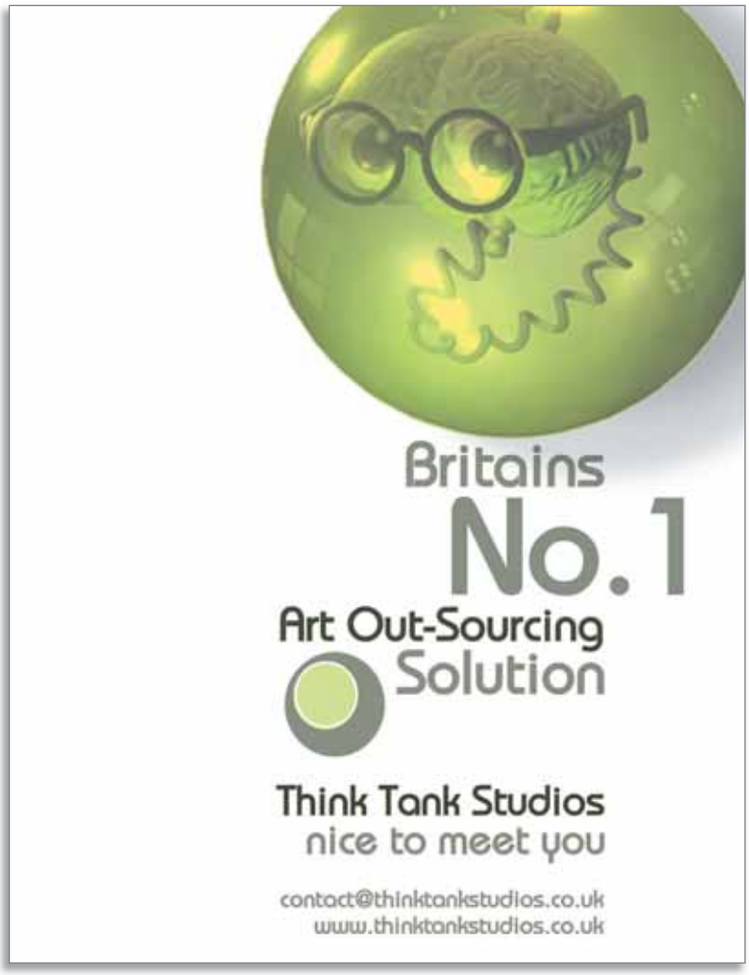

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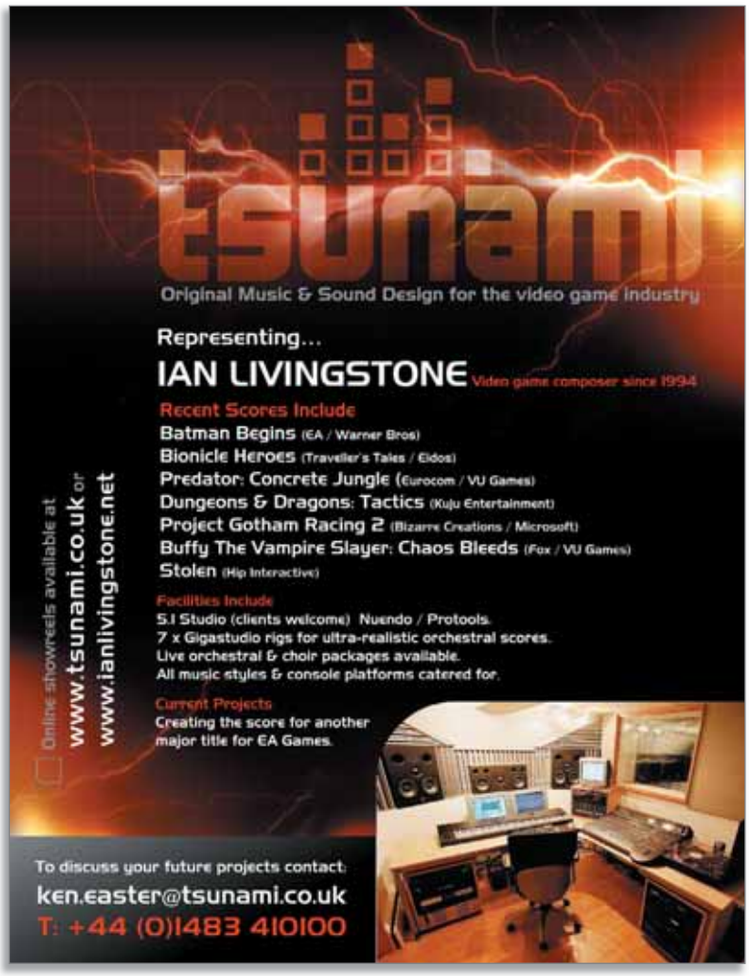
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Services Spotlight

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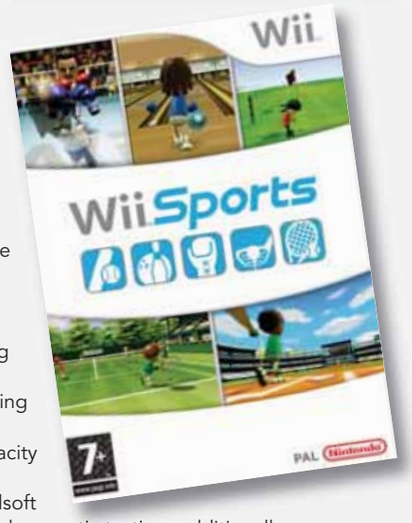
Founded: 1988
W: www.localsoftgames.com
E: sales@localsoftgames.com

Key Personnel: Randall Mage (founder), Nina Lampinen (office manager), Marc Cuellar (CFO)

Recent work:
■ *WiiSports* (Wii), *Final Fantasy IV* (GBA)

With over 20 years experience in video games localisations, and over 500 titles under its belt, it's safe to say that Localsoft knows its market.

Placing the most importance on the translation itself is Localsoft's motto, drawing on a pool of over 500 native speakers who, in order to assure fluid, natural output, only translate into their native tongue and have to take tests before being picked. Alongside the regular FIGS, Localsoft offers languages as diverse as Dutch, Greek, Finnish, Czech, Hungarian, Mandarin and Cantonese.



The same care and attention is taken with voice-over production, which the company always ensures is recorded in-country and with professional, native-language actors. All aspects of the dubbing process are handled, with native-language project managers sent to each country for large projects.

The company can translate a wide range of materials, including on-screen text, audio, manuals, strategy guides and even marketing material at a rate of one million words a month, with greater capacity available if needed.

Rounding off the service, Localsoft can also perform full linguistic and cosmetic testing, additionally performing a final consistency pass should the project have required multiple translators. Testing can either be performed in-house on professionally-manned debug units or done with native language testers working together with developers on the foreign language QA.

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Training News

Serious Games Institute buys virtual world tech

Coventry University's Serious Games Institute has announced it will use Fonterra's OLIVE software platform in its research.

OLIVE, which stands for On-Line Interactive Virtual Environment, will support the team's virtual world applications, game-based learning and interactive media projects for a number of industries. The 3D engine was chosen for its advanced feature set, the university explained.

"We selected Forterra's OLIVE platform given their market leadership in providing private, secure virtual worlds used for solving real problems such as group collaboration," said David Wortley, director of the SGI.

"OLIVE provides the opportunity to apply game technologies for all kinds of non-gaming enterprises in the corporate, healthcare, government, and entertainment industries. Virtual worlds, with their online, multiplayer environments, offer unique opportunities to take traditional models of learning, simulation and entertainment to a whole new level of innovation."

www.coventry.ac.uk

CRYTEK GRANTS FIRST EDUCATIONAL LICENCE FOR CRYENGINE 2

Florida's Ringling College of Art and Design has become the first educational institute in the world to licence Crytek's CryEngine 2. The signing has helped the German studio found a new educational licensing scheme for colleges and schools.

CryEngine 2 will be used by the college's computer animation department. Department head Jim McCampbell commented: "No other game engine comes close to offering the visual fidelity of the CryEngine 2, which can produce the kind of high quality near-photorealistic output in real time that until now required expensive render farms days, or even weeks, to generate.

"With the CryEngine 2, Crytek has clearly created a product that is a full generation ahead of anything else, and truly defined what next generation means today. Licensing the engine will ensure our graduates are prepared and experienced in working with a technology that is rapidly becoming a new industry standard, while allowing them the possibility to create virtually anything their imaginations can conceive," he added.

"We are extremely proud to have been chosen by such a highly regarded school," commented Faruk Yerli, managing director of Crytek, "The ranks of the Ringling alumni reads like a who's who of the computer graphics world, as do the companies they work for. Our own director of animation is an alumnus, which shows you how highly we regard their graduates.

"Now that Ringling will be training their students using our engine and tools, we look forward in the coming years to welcoming even more future graduate game designers and animators to our employ, as will the ever growing list of companies who have chosen to license the CryEngine 2 for their own productions."

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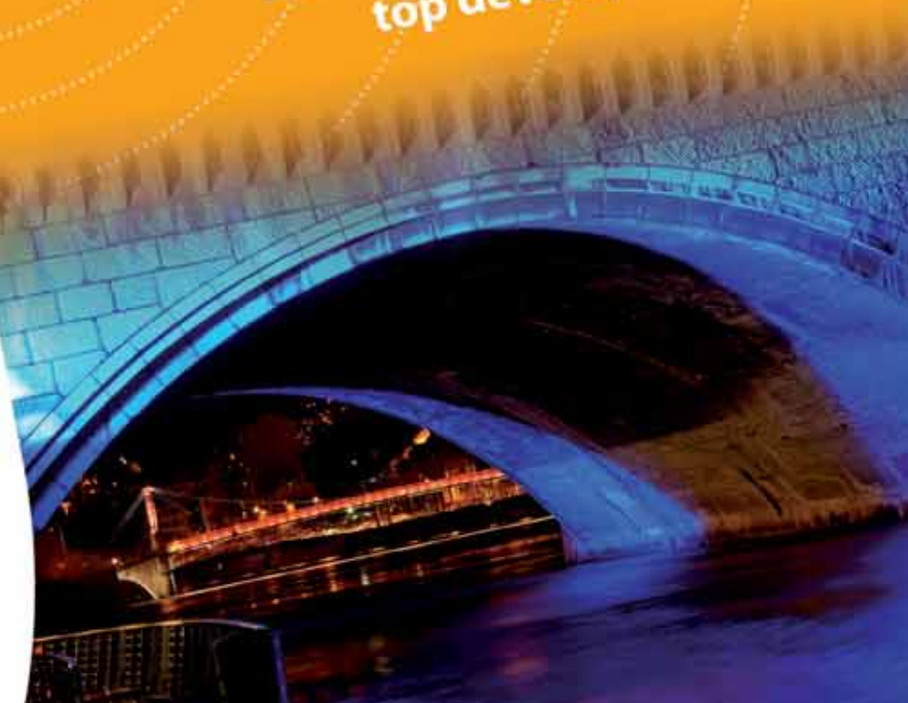

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THE BYRONIC MAN

A frightening glimpse into the mind (and notebook) possessed by **Simon Byron**…

I read somewhere that good columnists scribble notes between deadlines, so they've a permanent collection of their thoughts whenever a deadline looms. When I grow up, I'd like to be a good columnist, so I started something similar. Here's what this month's entries consisted of:

"Hey! Byronic! Yes, you… the 35-year old man over there…The daily grind has got you down… but you can escape this dull existence…" No-one told me games had become self-aware. I am 35 and a man, albeit only technically. So to be slagged off by the intro to *Tingle's Rosy Rupeeland* on the DS came as a shock. I wondered whether Nintendo advocate Chris Tarrant had been welcomed by a message calling him an orange-coloured adulterer.

"…If you don't want to miss this chance get to the Western Pool!"

Here's a tip: if you are going to start obeying videogames intros, play *Tingle's Rosy Rupeeland* in Hitchin on Wednesday mornings, because that's when they have the women's-only swimming sessions at the swimming pool. The kids go on Friday evenings, but they've banned spectators since the incident. Apparently "I'm just looking for Maddie" is not a valid reason to sit in the stands. And "it makes me see better" not accepted as an excuse for masturbating.

"Imagine if they let you test mobile games before buying them. It'd be the death of the market because everyone would realise the games are shit…"

The next entry: *"Why do news agents test lighters before they sell them to you?"* Which is a good question. They don't open cans of Coke before accepting money, or let you try on a condom before you leave the shop. Imagine if they tested mobile phone games before completing the transaction. It'd be the death of the gaming market, because everyone would realise they're all actually shit.

This note had been carved into the paper. Mobile games are particularly raw since I'd downloaded *Guitar Hero* mobile phone rip-off *Guitar Legend*. That game is the mobile game equivalent of phishing, and everyone involved with it should be ashamed of themselves whilst they're enjoying my £4.99. Fucking thieves. I'd written the names of the developers in the margin, for when The Time comes.

Next, some observations from when I was in WH Smiths: *"Why can't you buy videogames greeting cards? Why are so many books with shit, punny titles, written by women?"* Finally: *"What is the point of Hugh Grant?"*

Then: *"Something about Kate McCann playing Metal Gear Solid."*

Next, some notes from when I was reading *MCV*: *"Doesn't the editor of Famitsu look funny?" "Now there are so many collector's editions of everything, will the standard boxes be worth more in the long-run?"* I was thinking of *Halo 3*, then. I imagine Microsoft will ban me for something for that, but I'm a maverick.

"Why did 505 Games sponsor the TV show 'Are You Smarter Than A 10-Year-old?'" What is the world coming to? Will they next make a show where adults wrestle children? And what benefit does sponsoring *Are You Smarter Than A 10-Year-old?* give 505 Games, apart from being able to say they're sponsoring *Are You Smarter Than A 10-Year-old?*.

"Imagine if Brian Lara died now." And: *"Wouldn't it be brilliant if Tony Hawk did, too."*

Penultimately: *"Scribbling cocks in Drawn To Life,"* which is what I've actually been doing all month. My character Spazzy has cocks for arms, cocks for legs and uses a cock-shaped gun which fires sperm. THQ would have shifted more copies if they'd been honest about what everyone was going to do and called the game "Drawing Cocks Instead of What You're Supposed To Be Drawing".

Finally: *"Develop piece due in tomorrow. This won't really work, will it? You'll never be a good columnist."*

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